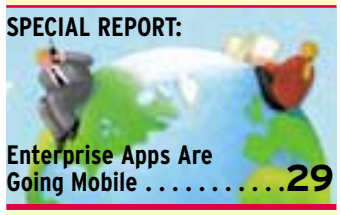
SD Times
SOFTWARE DEVELOPMENT
The Industry Newspaper for Software Development Managers

MARCH 15, 2002
ISSUE NO. 050

Sun's Linux Strategy Raises Questions for Developers ...3
Dokoni Releases Browser Detection Platform 3
Wily Monitors Systemwide App Performance 3
InstallShield, Marimba Partner to Distribute Software Updates 5
Sybase Details Plans For Web Services 6
Ericom Offers .NET ODBC-Based Host Integration 6
As-One Ties a Thread Through Management 9
ParaSoft Updates Jtest, Forte Tools Integration 9
AlachiSoft Generates Database Connectivity Components 10
Corel Introduces DeepWhite XML Suite 10
FineGround Accelerates Web Applications 13
Hit Software to Release Entry-Level Translator ...14
Versant enJin Supports Latest J2EE Specs 14
Starbase's CaliberRM Adds Development Kit 16
XScale Grabs Spotlight At Intel Developer Forum ..25
iLogix Releases UML Tools for Ada 26



SPECIAL REPORT:
Enterprise Apps Are Going Mobile 29

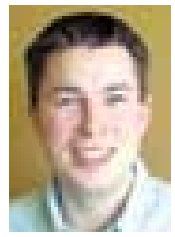
A BZ MEDIA PUBLICATION $7.95
www.sdtimes.com

WIND RIVER DEMOS VIRTUAL PROCESSOR OS, GUI TOOLS

BY EDWARD J. CORREIA

At the Embedded Systems Conference this week, Wind River Systems Inc. was expected to unveil VSPWorks, a real-time operating system and development platform that it claims simplifies the development of multiprocessor devices.

The kernel of the operating system, which was formerly known as Virtuoso, was acquired from German embedded systems developer Eonic Systems nv in April 2001, and had been in use in telecommunications, military and aerospace industries. According to Gareth Noyes, market development manager at Wind River (www.windriver.com), the company has integrated the software with its VxWorks RTOS, and has provided a framework for VSPWorks applications to access services of VxWorks-hosted systems elsewhere on a network, permitting developers to leverage VxWorks features from resource-constrained devices running VSPWorks.



VSPWorks sees multiple processors as one, says Wind River's Noyes.

Noyes claimed that the small-footprint VSPWorks RTOS provides a layer of abstraction that permits developers to build embedded systems based

▸ continued on page 25

Integration Suite Makes Room For Distributed Apps

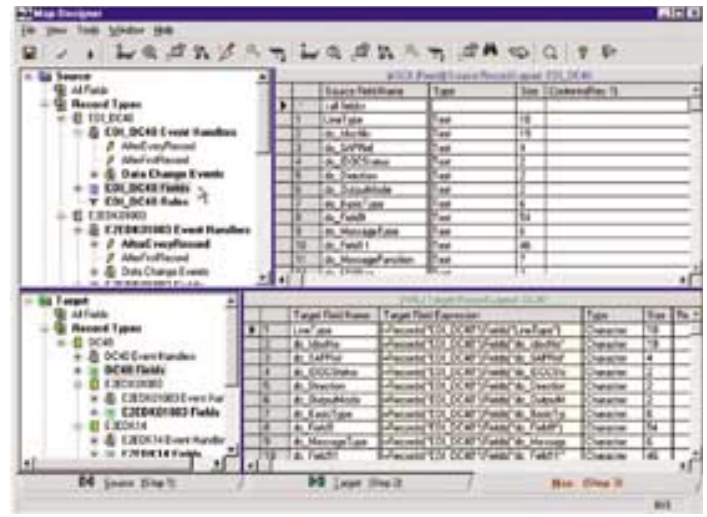
Data Junction solution tries to mimic how transactions are handled

BY DAVID RUBINSTEIN

Moving toward what it calls distributed application integration, Data Junction Corp.'s updated Integration Suite attempts to copy what it sees as a shift from point-to-point integration to a more transaction-oriented approach.

"Systems need to reflect the environments they're in," said Greg Grosh, who founded Data Junction (www.datajunction.com) 17 years ago. "The way the Internet works pushes everything down and out to the edges. The number of points of integration will grow, but individual activity will be

▸ continued on page 12



A map designer within Data Junction graphically organizes data.

TOGETHERSOFT'S COAD TAKES ON NEW ROLE

BY DAVID RUBINSTEIN

Although founder Peter Coad may always be seen as the visionary leader at TogetherSoft Inc., he's no longer running the show, at least not on a day-to-day basis. The new CEO is John R. "Beau" Vrolyk, who is replacing Coad as part of a management reorganization despite revenues of $47 million in 2001, a rate of growth 81 percent above 2000 levels, and almost 12 times growth since 1999.

▸ continued on page 19

A Data-Centric Approach to Collaboration

New company turns applications into 'views' of data

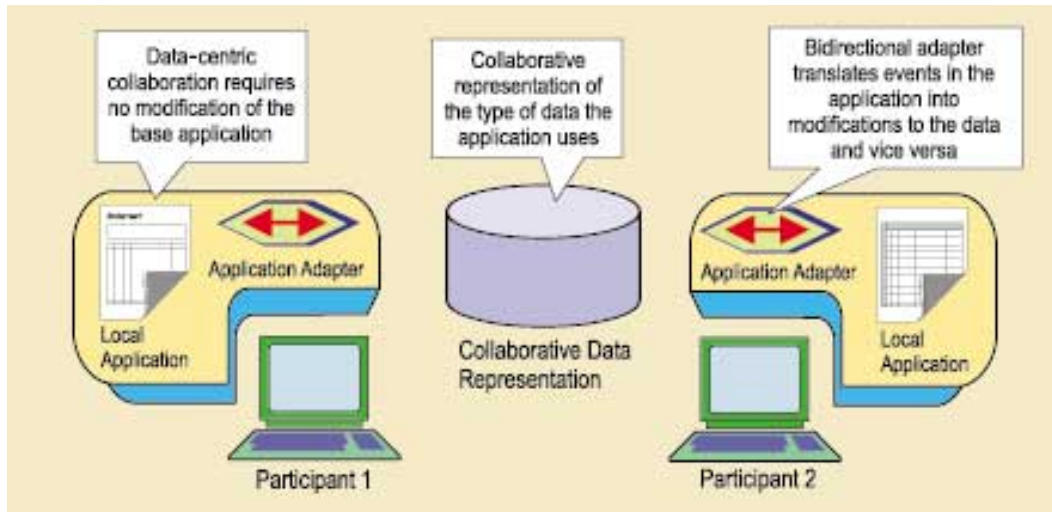
BY DAVID RUBINSTEIN

Advanced Reality Inc., a 17-month-old company that evolved out of a Rice University research project, has a new tool that it claims allows developers to add collaboration capability to existing applications without having to change any code.

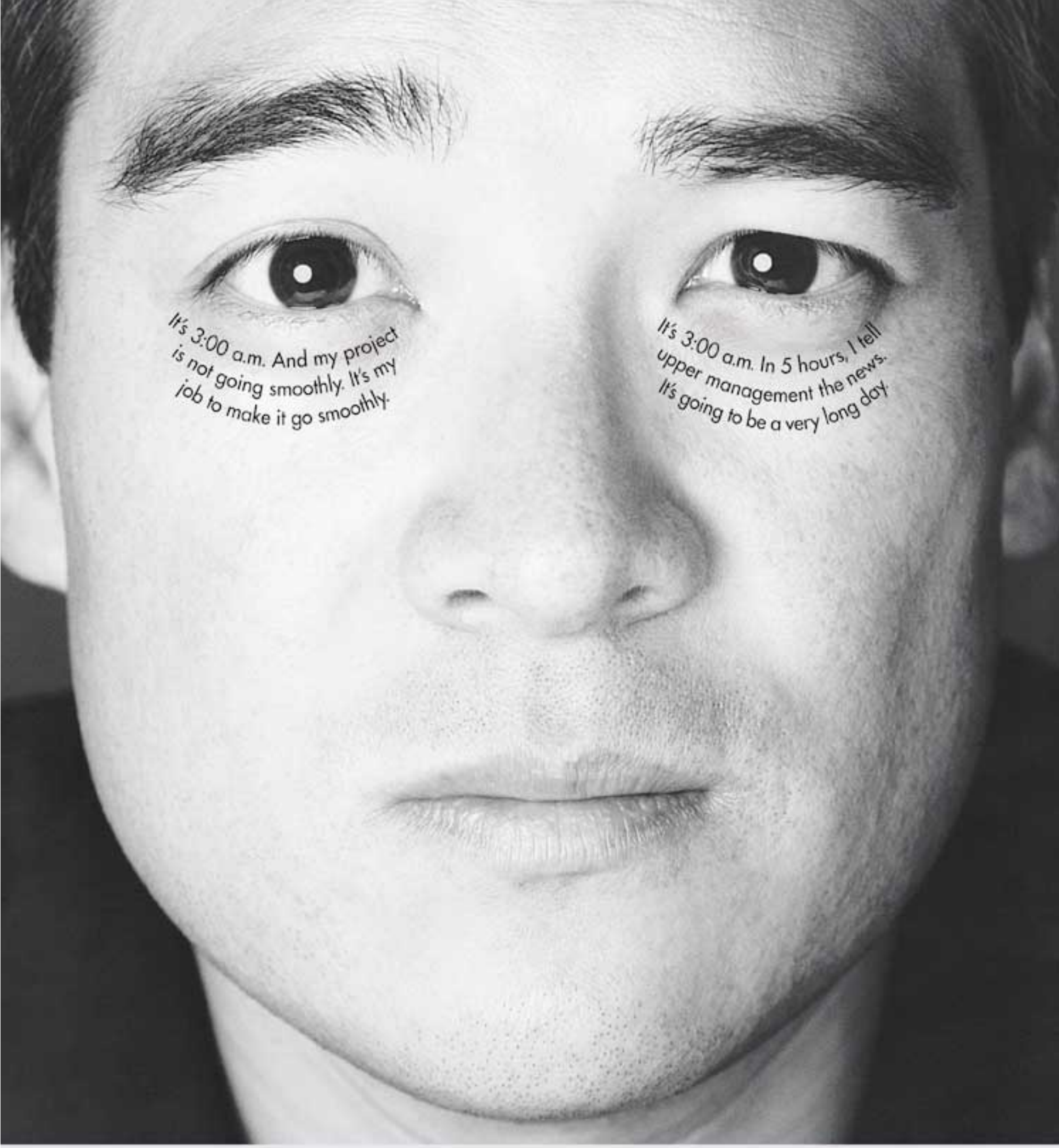
Derek Ruths, the 22-year-old co-founder and chief scientist, said the idea sprung from an undergraduate project involving the creation of a single-user visualization environment to study genome mapping data in virtual reality. "We realized that room for multiple scientists [to share the data] at once would be great," Ruths said, and the Presence-AR tool was born. This month, an adapter for collaborations using Microsoft Excel will be released.

Ruths explained that rather than rebuilding an application

▸ continued on page 20



Underlying data can be shared among disparate parties with Presence-AR regardless of the desktop application.



You're responsible for the success of your company's critical business applications. Without the security of stable software products and world-class support, your future may be full of sleepless nights. Next time, choose Rogue Wave® SourcePro™ C++ and get trusted, field-proven components coupled with expert support and services. You'll be secure in the knowledge that your development projects will be delivered on time, on scope and on budget. To find out more about SourcePro C++, visit **www.roguewave.com/sleepless.**

ROGUE WAVE SOFTWARE

SUN'S LINUX STRATEGY RAISES QUESTIONS FOR DEVELOPERS

BY CHRISTINA M. PURPI

Sun Microsystems Inc.'s recent announcement of a new Linux strategy has led to speculation as to where the company is headed, at least in terms of its own version of Unix, and what effect Sun's embracing of the open-source operating system will have on its developers.

The news, in what analyst Stacey Quandt of the Giga Information Group calls "an abrupt about-face from its primary focus on Solaris on SPARC," was announced early last month, and laid out plans to ship a full implementation of the Linux operating system, to deliver the entire Sun ONE software suite on the Linux platform and to ship built-in Linux compatibility with Solaris.

According to Herb Hinstorff, Sun's group product marketing manager for Solaris, the driving force behind this move was to "broaden current, Linux-based systems and to broaden the market and simplify working in a cross-platform environment."

For Java developers, he claimed, "[this announcement] won't have a big effect, because Java is already cross-platform…it's not a big deal for Solaris C and C++ developers either," he explained, but for Linux developers, "it's one more platform on which to deploy applications."

The full implementation of Linux is scheduled to be released by midyear, and the direction for Sun ONE on Linux will unfold over time, said Hinstorff. Some parts of the Sun ONE suite are already available on Linux, but some key components are not, such as the iPlanet Java application server.

When asked about the Linux announcement and how it would affect its Solaris strategy, Hinstorff claimed, "We are not in any way shifting from the strong commitment we have [to Solaris]." Quandt said this announcement "ends Sun's 'last man standing' status in regard to only following a proprietary Unix strategy."

"I don't see an immediate shift [from one platform to another] as a result of this announcement," said Hinstorff. The only benefit he could come up with was that for C and C++ developers, "[Linux] provides additional tools on which to develop and a broader set of platforms on which to deploy."

According to Quandt, Sun is focusing on Linux for low-end horizontal scaling and Solaris on SPARC for larger systems and vertical scaling. "Does this [strategy] mean that Sun should be taken seriously as a software company?" Quandt asked. "What is clear is that Sun wants to be taken seriously as a software vendor and not just as a hardware provider."

In order to provide developers with tools for the Linux platform, Sun announced a compatibility assurance toolkit for source compatibility between Linux and Solaris, called LinCAT. "If you wrote a C program in Linux and run it on Solaris, LinCAT will make sure your code is portable," according to Hinstorff. He also mentioned tools for both the Linux and Solaris platforms already exist through Forte for Java and the Sun ONE suite of tools for Java. ▮

Dokoni Releases Browser Detection Platform

Deka fills gap in competition between high- and low-end solutions, company claims

BY CHRISTINA M. PURPI

Pushing itself into the Web server tool market, professional services company Dokoni Inc. has released Deka, a Web development platform for browser detection and Web site access control that delivers customized content to any Web-enabled device. The company claims it lies between high- and low-end detection engines in the market.

"There is a gap in the competition," claimed Joe Lima, director of research at Dokoni (www.dokoni.com), claiming that although there are scripts for client-side detection of different browsers, such as Cyscape's BrowserHawk, those scripts are limited because detail is constrained. Plus, knowing how to handle different browsers is left up to the developer.

Alternatively, Lima said the "full-blown solutions which render the technology by using XML and XSLT to transform markup are expensive, require a lot of integration and are not legacy friendly, such as the things you find in WebSphere or Oracle 9iAS. Deka fits in the middle. It gives developers everything they need to make a Web server device-independent, but is not complex and demanding."

Deka includes a database of user agent profiles that holds client properties such as browser and device type, connection speed, markup and scripting preferences, according to Lima.

"Because 25 percent of the cost of building and maintaining a Web site goes into dealing with issues such as cross-browser incompatibility, you save a lot of money and you expand customer reach because you have created a site that can reach any user on any device," said Michael Lipsey, Dokoni's vice president of sales and marketing.

A rules engine is built into Deka, which talks to the Web server and routes the page. "For example," Lima explained, "if you try to access a site via a cell phone, a redirected page will say, 'Our cell portal site isn't ready yet. Please come back in a month,' or 'You are using an old version of a browser. Please update,'" explained Lima.

The problem, according to Lima, is that developers don't know which devices and browsers are being used.

"It's like they're developing blindfolded," Lima said. "Deka allows the developer to be device-aware in coding."

Deka, which translated from Japanese to English means "detective," sits on a Web server and can be considered a Web server extension.

Deka is available for the Apache and Microsoft IIS Web server on Linux, Solaris and Windows, and is available in two editions; the Developer Edition, which licenses for $595 per server and allows for site set-up and the creation of rules; and the Web server commercial license, which costs $2,500 per server, according to Lipsey. ▮

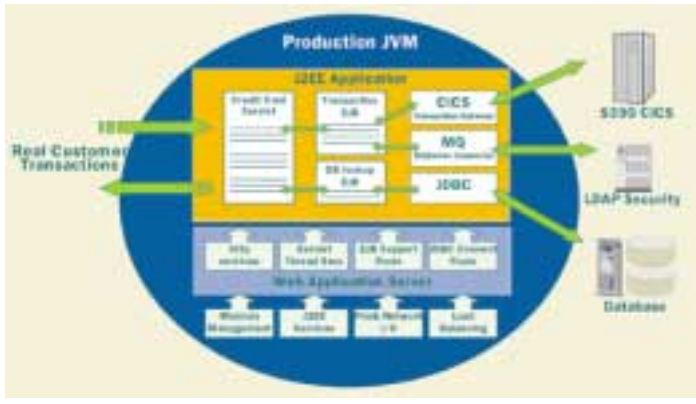
Wily Monitors Systemwide App Performance

BY DAVID RUBINSTEIN

With the latest version of its Introscope monitoring system last month, Wily Technologies Inc. is expanding the reach of performance management beyond the Web server to a broader part of the application ecosystem.

According to senior vice president of marketing Vic Nyman, Introscope 3.0 now offers a global view of Web applications, app servers and the ties to back-end systems. This extends beyond previous versions' more limited view of Java Web applications. "Proactive management has become institutionalized," Nyman said. "We're seeing the rise of an individual called the application support manager…who needs a dashboard view of how things are working."

Introscope now works with applications enabled with the Java Management Extension protocol, which Nyman described as the Java communication standard for management platforms, as well as being integrated with Simple Network Management Protocol consoles to provide a previously unavailable view inside applications via Management Information Bases. "We've taken a 20-year-old standard and added a twist," he said, allowing for integration with such third-party tools as Computer Associates' Unicenter, HP's Openview and Tivoli's TEC.



Introscope now offers a broad view into production applications.

Nyman also said that specific functions of Introscope are bound tightly with BEA's WebLogic and IBM's WebSphere J2EE application servers, and thereby provide a better view into the platform's configuration and performance.

With the new release, Wily also is introducing PowerPack for WebLogic, which Nyman described as a set of optional add-ons to Introscope that provide the broader view into databases, IBM CICS systems, transaction servers and Java connectors. A planned PowerPack for WebSphere was set to be announced in early March. The packs, Nyman said, combine the view into EJBs, JSPs and servlets with metrics specific to the platform, easing performance monitoring in either the application or one of the supporting systems.

"As developers use the Java platform more, with its object-oriented approach, it's easier than ever to build complex applications with components," said Mike Malloy, Wily's (www.wily.com) vice president of marketing. "However, there is far more complexity in operating and managing them."

Nyman claimed Introscope is flexible enough to be adapted to an organization's processes because it can be plugged in at different points of the app life cycle. Introscope 3.0 sells for $7,500 per processor, and PowerPacks cost between $500 and $1,200 per processor, depending upon the platform. ▮

Software Development Times (ISSN #1528-1965, USPS #001-9625) is published 24 times a year by BZ Media LLC, 2 East Main Street, Oyster Bay, NY 11771. Periodicals postage paid at Oyster Bay, NY and additional offices. POSTMASTER: Send address changes to SD Times, 2 East Main Street, Oyster Bay, NY 11771. SD Times is a registered trademark of BZ Media LLC.

Building J2EE and Web Services?

Accelerate development and deployment with AltoWeb

See Us at JavaOne- Booth 1719 For a Demo.

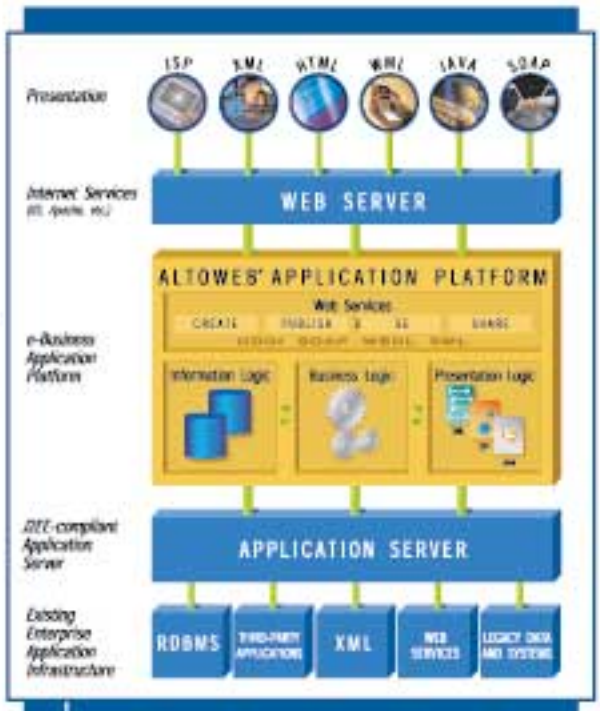
Java™ 2 Platform, Enterprise Edition (J2EE™), XML and Web Services are widely recognized as the foundation for e-business applications. But building, deploying and managing applications on top of application servers is challenging. To succeed, developers need to:

1. Learn and manage a lot of different technologies that are always changing—JSP™, servlets, EJB™, JMS, JDBC™, XML, UDDI, WSDL, and SOAP, to name a few.
2. Choose the right architecture and use the best J2EE practices—because the wrong decisions can lead to performance problems and costly rework later on.
3. Select reusable application components that let them focus on new development.
4. Assemble, test, deploy, monitor, and manage J2EE applications and Web Services.

AltoWeb delivers up to 10x faster productivity and time to deployment
The AltoWeb Application Platform lets developers build, deploy, manage, and maintain e-business applications up to 10x faster by replacing the lengthy, custom, and complex coding for J2EE, XML, and Web Services with a packaged solution that shields developers from the low-level complexities involved in building J2EE applications and Web Services. With the AltoWeb Application Platform, developers focus on building 20% of the application specific to their business, and use Java IDEs and Web authoring tools of choice.

Packaged components and reusability out of the box
With AltoWeb, developers get a comprehensive set of pre-packaged EJB components and services that provide the foundation for e-business applications and promote true reusability and maintainability:

- Information logic components enable fast integration to existing enterprise infrastructure elements—including relational databases, file servers, Web servers, and legacy systems.
- Business logic components deliver process control flow and rich functionality.
- Presentation logic lets developers rapidly build rich user interfaces using a variety of open industry standards—including HTML, XML, JSP, WML, and Java.



The AltoWeb Application Platform lets you assemble, deploy, test, monitor, and manage J2EE applications.

Live component assembly shrinks the time spent on assembly, testing, deployment, and maintenance from months to days.

- Built-in support for XML integration and Web Services enables developers to create, publish, monitor, and use Web Services as an integral part of each application.

Accelerated and simplified development, deployment and management
AltoWeb adds the tools development teams need to accelerate and simplify the entire application lifecycle: from development through assembly, testing, deployment, and runtime management.

With AltoWeb, developers move to rapid, visual, live assembly and testing of packaged, reusable J2EE components. They move away from the lengthy, error-prone custom development, integration, component deployment, and low-level testing that consumes most of the time and resources in projects today.

- Application developers who know the business define application logic directly.
- Web page developers focus on the overall look and feel using their Web authoring tools.
- Java developers now focus on developing specialized application logic with their existing Java IDEs.

AltoWeb automates deployment and runtime management by building these facilities into your applications.

Find out more about how AltoWeb has helped its customers become 10x more productive, and deliver applications up to 10x faster. Visit www.altoweb.com to download a complimentary 30-day evaluation copy of our software and get more information.

© 2001, AltoWeb, Inc. All rights reserved. AltoWeb is a registered trademark of AltoWeb, Inc. in the United States and other countries. EJB, Java, J2EE, JDBC, and JSP are trademarks of Sun Microsystems, Inc. All other trademarks are the property of their respective owners.

AltoWeb™

FREE 30-DAY TRIAL!
Download at www.altoweb.com

InstallShield, Marimba Partner To Distribute Software Updates

BY ALAN ZEICHICK

InstallShield Software Corp., a well-known provider of software packaging and installation utilities, has teamed with Marimba Inc. to offer a set of software update services for both enterprises and ISVs.

Viresh Bhatia, InstallShield's CEO, described the problem of packaging and distributing desktop software as a fundamental one—but one which is undergoing rapid change in the Windows world. "There are changes in operating systems; a lot of companies are migrating to Windows 2000 and Windows XP. Applications are being updated more frequently. And the packing format for applications has switched to a new format, called MSI Package, for the Windows installer."

Although InstallShield and other installer vendors have supported Microsoft's MSI format for several years, Bhatia said that Microsoft is increasingly convincing developers to use that format to package their applications, instead of using the proprietary formats offered by each install-utility manufacturer. "Microsoft has a compelling pitch that MSI makes applications more reliable and self-healing," he said.

Bhatia noticed that historically, InstallShield (www.installshield.com) focused on helping ISVs package their software, but "what we are now focusing on is helping enterprises repackage their applications into the MSI format." Bhatia continued, "We've had that format for a couple of years, but there are two twists that are unique to large enterprises—something that ISVs don't do."

"The first is conflict management," Bhatia continued. "If you're an enterprise and you're distributing a large number of applications, like 700 applications for a typical bank, you need to make sure that these applications will not have a conflict with each other or with the operating system. You can't afford to ship an application to a teller's machine and have that machine not work. That's just not acceptable, and unique to the enterprises, where they have to detect and repair the conflict."

Another area specific to businesses, he added, is remote software distribution across the network or the Internet. "From a central point, [IT] wants to be able to control what software is installed on that teller's machine," he said, "what software gets installed on a bank manager's machine, and so on. What Marimba is focusing on is that software-distribution piece. They have software that allows large enterprises to manage the software-distribution process."

Bhatia said that one should think of the software-distribution process as a pipe being managed by Marimba. "What's riding in these pipes are software packages [created by InstallShield]. The benefit of this relationship is that we are going to enhance our packages so they ride [Marimba's] distribution pipes much more seamlessly, so that when they arrive at the other end, the knowledge about the success of the installation arrives back [at the central point] more seamlessly."

The new service is supported by InstallShield's AdminStudio Professional Edition software, which sells for $2,499 per developer seat.

On the ISV side, Bhatia said that developers are more interested in getting software distributed to customers, whether they're end users within an enterprise or home users. In that case, he said, the pipe connecting the users is the Internet, over which the ISVs will want to send software updates. "ISVs are not interested in what software gets installed on your desktop," he said, "they don't care. What they do care about is that you have their most current software."

The ISV-oriented relationship with Marimba is to allow developers to use InstallShield's forthcoming Update Service, expected to be generally available before the end of this month. "ISVs won't need any infrastructure," he said, "they simply enable their applications to use our update service and ship those applications [to their customers]. We provide the infrastructure to manage the updates."

The end user's application, he explained, would query an InstallShield server, which would trigger an action on the ISV's servers—which would use Marimba's software to deliver the update to the customer. "Marimba has technology which make the transmission for the software more reliable, faster, easier. They provide the technology which connects the ISVs to the update service." Bhatia said that using Marimba is more scalable than using FTP or HTTP. "You can't have a million people doing FTP to your server, it doesn't work, but you can have 5 million people downloading updates from your server using Marimba."

For smaller- and medium-sized ISVs, Bhatia added, there still is the option to use an HTTP- or FTP-based service. The Marimba solution, he said, is for customers that have hundreds of thousands of users who will need the software updates.

ISV pricing for InstallShield's Update Service is $250 per year for 5,000 end users. ■

How much are product defects costing your company?

FREE
ON-LINE DEMONSTRATION.
Join our free series of Webinars at
www.teamshare.com/webinars

Don't wait until after your product is in the market to find a defect. Releasing a product with even a minor defect means your company loses credibility and, more importantly, it loses money.

Let TeamShare's TeamTrack® software fix your defect tracking and team communication processes.

Remember the good old days? Oh, say last year? In those days, you actually had enough people to do what needed to be done. There were people assigned to track all product defects, issues and enhancement requests and people to manage the overall process to make sure nothing fell through the cracks. There were people who ensured that everyone knew what to do and when to do it. But today you still have to release a quality product and you have less people to do it. The method you used then to manage this information now has tiny cracks appearing in what used to be a seamless process. Defects not tracked. Issues not updated. Enhancements not implemented. Poor reporting. Issues slipping through the cracks. No ownership or accountability. Lack of communication between critical departments. That's why we developed TeamTrack software. To make sure that product defects and issues don't get lost. It automatically notifies the next person that an issue is assigned to them and ensures that everyone knows what they are supposed to do when they are supposed to do it - far faster and more efficiently.

New!
Ask us about our integration with PERFORCE

teamshare®
www.teamshare.com
1.888.832.6742

News Briefs

COMPANIES

CrossLinks Systems Inc. will incorporate **SpiritSoft Ltd.**'s JMS server into its financial services applications . . . **Truis Corp.**, which sells customer intelligence software, is partnering with **Data Junction Corp.**, which sells data transformation tools. According to the companies, the partnership will provide Truis' customers with the ability to integrate external data into its IQ System, a Web-based CRM application . . . **SYS-CON Media Inc.**, which owns several software development magazines and trade shows, has launched a research division, called EnginData. Calling SYS-CON its "exclusive media partner," EnginData will offer free subscriptions to SYS-CON's magazines to survey participants . . . **Altio Inc.** and **Software AG Inc.** are teaming to integrate their XML product lines. Altio's AltioLive XML development platform, which targets Web browsers, will be able to deploy applications that use Software AG's Tamino XML server. No time frame was provided for the release of products with that integration.

PRODUCTS

The **iPlanet Application Server** from Sun Microsystems Inc. has just been updated to improve performance, as well as add new features. Version 6.5, which should ship mid-March, incorporates the iPlanet Message Queue for Java, has enhanced interoperability with JMS, CORBA and Struts, and has tighter integration with Sun's Forte for Java IDE. Pricing is $19,995 per processor . . . A special version of **Crystal Reports**, a well-known reporting package from Crystal Decisions Inc., is included with Visual Studio .NET. The tool, which ties into the .NET Framework's ADO.NET database-access engine, includes a SOAP connector for Web services . . . InCert Software Corp. has shipped its new **Halo Application Fault Monitor**, which seeks to report source-level root-cause analysis of software failures in deployed applications. The fault monitor, which works with Java, Solaris and Windows, costs $50,000 per monitored application, regardless of the number of deployed copies . . . **ImagXpress**, a COM/ActiveX imaging component from Pegasus Imaging Corp., now can work with the JPEG 2000 file format via a new add-on. The JPEG 2000 add-on, which costs $999, works with ImagXpress 6.0 or later, which itself costs $399 per developer . . . Tools maker iCodeTools Inc. has updated its **iCodeRepository** tool to help developers edit and manage small pieces of code. The new release, 2.17, includes functions to convert text source files to HTML, pick colors and monitor the clipboard. The Windows-based utility costs $35 . . . Princeton Softech, a division of Computer Horizons Corp., has updated its **Archive for Servers** storage management application to allow ODBC access to archived data . . . Epicentric Inc. has released **Foundation Builder**, a tool that it claims lets nontechnical end users build and share applications within a Web portal built on its own Foundation Portal 4.0. . . . Lecco Technology Ltd. has a new version of its **SQL Expert for Oracle** performance optimization toolkit. Version 3.2 integrates Oracle's PL/SQL coder and Lecco's SQL editor to let developers test and optimize SQL statements on the database server itself. It also has new options that control how SQL Expert rewrites PL/SQL statements. The package is priced at $7,200 for three developer seats . . . SyTech Inc. has updated its **XLReporter** report generator for Excel. The version 3.0 release adds an ODBC interface that can automatically generate SQL queries . . . The KDE League has released the second beta of **KDE 3.0**, an Internet-enabled user interface for Linux. KDE 3.0, which is tentatively scheduled for completion in April or May, offers better support for Javascript and DHTML content on the desktop than KDE 2.2 . . . NetManage Inc. has released **OnWeb 5.2**, a tool for publishing mainframe and minicomputer data onto the Web. The new version includes a unified framework for host publishing and integration, new screen-filtering capabilities and a plug-in for Microsoft's FrontPage HTML ed-

▸ continued on page 10

Sybase's Plan for Web Services Like the Others

But claims to bridge differences in standards

BY DAVID RUBINSTEIN AND EDWARD J. CORREIA

Having completed revisions to many of the tools and servers in its stable, Sybase Inc. late last month described how those products can be used to create, provide and consume Web services—a description that but for a few new wrinkles repeats many of the themes already accepted by the industry.

Sybase's chief technology officer, Peter Hoversten, said the company's offering accepts the low-level standards of SOAP, WSDL, UDDI and XML and tries to "bridge gaps" when companies are at different levels of acceptance, or have chosen different protocols.

"Web services require a set of globally applicable integration standards," Hoversten said, "but the vendor community doesn't have the best track record on implementing on common standards." Sybase, he said, is working with IBM Corp. and Sun Microsystems Inc., among many other vendors, on the newly formed Web Services Interoperability Organization to create higher-level standards, but wanted to release products for Web services now. "In the best case, we'll get broad universal acceptance of standards," he said. "It may take a while, or we may not get there at all. We're trying to bridge those differences today."

The company has added XML, SOAP, UDDI and WSDL capability to its months-old OpenBusiness Interchange hosted service platform to allow businesses using Web services to communicate with businesses doing EDI over FTP, for example, with Open Business Interchange doing the transformation, he said. Also, Open Business Interchange can be used to access multiple Web services sites and deliver the data in whatever form a developer chooses without writing any code, he added.

Sybase's EAServer J2EE-compliant app server, upgraded to version 4.1 in late January with J2EE 1.3 and Web services support, and the newly announced Business Process Integration Suite enable developers to create and provide Web services. Developers also can create portlets within the company's Enterprise Portal that link to Web services, while the m-Business Studio integration software package gives access to Web services from mobile-device applications. The company is working to add ebXML and RosettaNet support into the server line; Sybase senior evangelist Jonathan Baker indicated at the recent Wall Street on Java conference that the company is considering releasing the ebXML project as open source.

Hoversten said Sybase is working on full Web services capabilities within its ASE 12.5 database to allow the application to store and publish XML and Web services directly from the database; he expects the work to be completed by year's end.

"Web services still are in the early adoption phase," Hoversten said, "but we've taken a companywide approach."

SYBASE, SHARP WORK ON ZAURUS ALLIANCE

Sybase also continues to reach out to mobile executives. The company has forged an alliance with Sharp Electronics Corp. to create a developer program that offers deep discounts on subscriptions of its SQL Anywhere Studio development tools and on developer versions of Sharp's Zaurus SL-5500 Linux-based handheld computer.

Rob Veitch, director of business development at iAnywhere, said that the developer program is designed to help what he described as large groups of potential customers seeking affordable platforms to mobilize their applications. "The majority of people are trying to address improving productivity and effectiveness of their mobile workforce," which he said includes government inspectors, defense department workers, and those in financial and insurance industries. Veitch described the insurance agent market in China as "bursting with pockets of free enterprise like a Tupperware party gone mad."

To address such needs a few years ago, Veitch said that laptop computers would likely have been the platform of choice. But today, "they are looking at [Microsoft's] Pocket PC… [but people] don't want to be beholden to Microsoft," he said. Zaurus will run applications written in Java or any language that targets Linux. ▮

Ericom Offers .NET, ODBC-Based Host Integration

BY ALAN ZEICHICK

Looking to help enable .NET applications to play a role in enterprise application integration, Ericom Software Inc. has released an update of its PowerTerm Host Publisher middleware software.

The Host Publisher application uses screen scraping to read data from host-based systems, such as IBM's OS/390 and AS/400 systems, as well as minicomputers from Data General, Digital, HP and Tandem, according to the company. The application makes those systems available in a Web browser, as well as programmatically through a Microsoft COM interface.

The version 3.6 release, which shipped in late February, includes new wrappers that allow Host Publisher, and therefore the host applications, to be accessed from .NET applications. The update also includes OBDC access to host data through its terminal-emulation interface; Ericom (www.ericom.com) claims that developers just need to set up connections to the hosted application as if it were an ODBC-compliant database.

Host Publisher can also interoperate with several application servers, including Macromedia's ColdFusion. Also in February, Ericom announced that Host Publisher can be integrated with BEA Systems Inc.'s WebLogic J2EE application server, which then provides not only Java but also SOAP/XML access to the host information.

Pricing starts at $25,000 for a single host server with 50 concurrent user connections. ▮

Rational®
the software development company

97 days

3 geographies

4 teams

22 developers

35 deadlines

26,307 cans of Red Bull

3 programming languages

1 solution

One solution? With all the stuff you have to deal with? As if that's going to work. Well, what if that one solution could free your teams from the many obstacles they face? What if it alone had all the integrated tools they need? Like software configuration management, modeling, requirements management, testing and best practices. What if that one solution even had automated project management? Then you'd have Rational Suite® One solution, lots of answers. Need the proof? Check out what IDC has to say about customer success with Rational Suite at **www.rational.com/offer/suite4.**

be liberated

Rational, the Rational logo and Rational Suite, among others, are trademarks or registered trademarks of Rational Software Corporation in the United States and in other countries.
ALL RIGHTS RESERVED. Made in the U.S.A. ©2001 Rational Software Corporation.

WebSphere. software

IBM, WebSphere and the e-business logo are registered trademarks of International Business Machines Corporation in the United States and/or other countries. © 2001 IBM Corporation. All rights reserved.

IN THE PARALLEL UNIVERSE, DEVELOPERS' TASKS WERE COMPLEX. HERE, THE CODERNAUTS FOUND A SIMPLER WAY.

WEBSPHERE *FOR* OPEN TOOLS

SUPPORTING A TRUE OPEN ENVIRONMENT, BACKED BY INDUSTRY LEADERS.

e business software For free code, visit **ibm.com**/websphere/ibmtools

IT'S A DIFFERENT KIND OF WORLD.
YOU NEED A DIFFERENT KIND OF SOFTWARE.

As-One Ties a Thread Through Management

Project solution adds time and expense functionality

BY DAVID RUBINSTEIN

Wrapping together what it identifies as four key cornerstones of project management, As-One Inc. is expected soon to release version 5.1 of its management and collaboration solution.

The As-One solution, according to president and co-founder Shailesh Patel, is a series of portals and pages that expand the boundaries of traditional project management tools, which he said "are good for managing tasks, hours and costs, and that's pretty much it."

"These are extremely important, but As-One helps you get information about how to do a task, for example. If everything resides in different places, people spend a lot of time looking for things," he said. "They end up creating stovepipes, which helps make projects go wrong. This eliminates the chaotic environment."

Patel named team collaboration, project management, knowledge management and process improvement as the four key areas for successful software development, and said As-One provides developers with the ability to link information about requirements, discrepancies, actions, knowledge and risks with tasks and resources, all in one integrated solution. Among the portals are the main My Workspace, which summarizes all activity and information in a project; Projects, which provides generalized administrative functions; Actions; Risks; Requirements and Knowledge, which lets users look up best practices and process standards.

The major improvement in version 5.0, which was released in late January, was better integration with time and expense systems, Patel said. Version 5.1 will add more to the reporting capabilities, he added.

"The focus was to wrap around everything that goes on in a project and work down from there," Patel said. "We find the majority of customers need some basic requirements management, for instance, but don't require the ability to trace attributes for each requirement. You can't build your own attributes list with As-One. You would use [Rational's] RequisitePro or [Telelogic's] DOORS. The integration is not at the API level for other engineering tools."

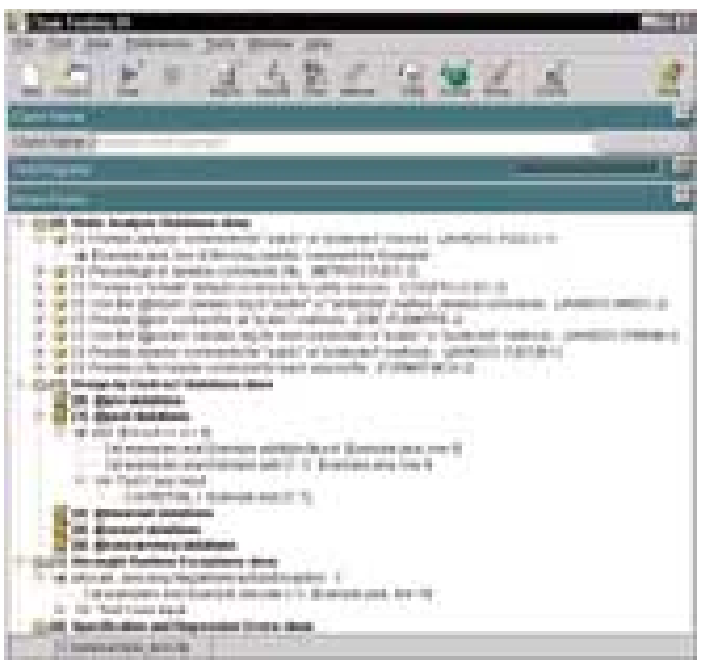
As-One can stand alone or be used to extend the functionality of Microsoft's Project 2000, according to Jim Staken, As-One vice president and co-founder (www.asone.com). As-One is sold in two editions—Enterprise, which includes SW-CMM Level 3 processes, policies and templates and a week of training and support, costs $70,000; and Standard, which does not have Microsoft Project 2000 support, SW-CMM processes, or time and expenses capability, costs $50,000. There is no limit to the number of users; one server can support 150-200 users, according to sales and marketing vice president Mike Fox. Additional servers for either edition cost $25,000. ■

ParaSoft Updates Jtest, Forte Tools Integration

BY CHRISTINA M. PURPI

ParaSoft Corp. is scheduled to release an update of Jtest, its Java testing tool, and an integration with Sun's Forte for Java IDE at the upcoming JavaOne Conference.

Version 4.5 of Jtest will include new features such as the expanded ability to test JavaServer Page files, 50 new Java coding guidelines, automatic generation of test classes and templates for freeware black-box testing tool JUnit (www.junit.org), and increased functionality of white-box, black-box and regression-testing features. "With the 4.5 release, Jtest will be able to test all the functionality within a JSP, instead of only testing the JSP output," said Paula Moggio, a spokesperson for ParaSoft (www.parasoft.com). "These tests are performed by doing static and dynamic analysis on the Java code contained in the JSP." Jtest's pricing starts at $3,495 and is available for Linux, Solaris and Windows.



The newest version of Jtest can now test all the elements within a JSP.

Also scheduled to be announced at the show is an integration of Jtest and Sun's Forte IDE. This integration will allow Forte users to use Jtest in utilizing a single environment to write and test applications. "All you have to do is push the Jtest button on the Forte IDE," claimed Moggio. ■

WebSphere software

SUPPORTERS
OF THE NEW OPEN DEVELOPMENT
ENVIRONMENT.

ALTOWEB
ASIST
BOWSTREET
BROWSERSOFT, INC.
CAST
COLLABNET
COMMERCEQUEST
COMPUWARE
EMBARCADERO TECHNOLOGIES
HOLOSOFX, INC.
INSTANTIATIONS
INTERWOVEN
LEGACYJ
LOGICLIBRARY, INC.
MACROMEDIA
MERANT
MERCURY INTERACTIVE
MID-COMP INTERNATIONAL
MKS INC.
NEUVIS SOFTWARE
PEREGRINE SYSTEMS
QNX SOFTWARE SYSTEMS
RATIONAL SOFTWARE
RED HAT
SERENA SOFTWARE
SITRAKA
SKYVA INTERNATIONAL
STARBASE
SUSE LINUX
TELELOGIC AB
TOGETHERSOFT
VERSANT
VERSATA, INC.
WILY TECHNOLOGY

e business software

IBM

For free code, visit ibm.com/websphere/ibmtools

News Briefs

MORE PRODUCTS

◂ continued from page 6

itor. Prices start at $16,000 . . . OSE Systems Inc. says that its **OSE** RTOS will work with IBM Corp.'s WebSphere Micro Edition and WebSphere Studio Device Developer. OSE will also resell IBM's tools within the wireless market. OSE's RTOS runs on ARM and PowerPC processors . . . **InterStage**, the Java-based business process management system from Fujitsu Software Corp., has been updated to work with Enterprise JavaBeans, as well as CORBA and RMI interfaces to application servers. The new version, 5.0, also includes a documented database schedule, a new server administration console and double-byte support for international character sets . . . Data Representations Inc. has shipped its **Simplicity for Mobile Servers**, a J2ME rapid application environment for building XML-based wireless applications. The RAD tool runs on Linux, OS/2, Mac OS, Unix and Windows . . . **CDBF** 1.0 is a new database viewer from WhiteTown Software for working with files in the DBF file format; such files are created by dBase III and FoxPro. The viewer, which costs $35, can also export database tables to various formats . . . Quest Software Inc. has integrated its **Knowledge Xpert for SQL Server** tool with Microsoft's Visual Studio .NET. Knowledge Xpert is a technical reference tool for developers and database administrators. The tool is priced at $165 per seat . . . Embedded tools developer Metrowerks, a subsidiary of Motorola Inc., has released its **CodeWarrior** Java development tools for the Symbian OS, which is used for mobile telephones. Metrowerks plans to offer C++ tools for Symbian OS later this year . . . Red House Software Ltd. is offering **ANTS**, a load tester for XML-based Web services written using Visual Basic .NET. ANTS (Advanced .NET Testing System) sells for $2,490 for a 100-concurrent-user version . . . Dundas Software Ltd. has released a server-side chart generation component for Microsoft's .NET platform. **Chart ASP.NET Professional Edition**, which runs on the CLR and uses .NET's new GDI+ graphics engine, sells for $699 . . . Stellent Inc. is now offering **Quick View Plus 7.5** for Windows CE, a document view for handheld devices that can show more than 70 file formats. This is a subset of the Windows desktop version of the product, which can manage 225 file formats . . . Seapine Software Inc. has released a new version of its **TestTrack Pro** defect-tracking system designed to integrate with the Visual Studio .NET IDE. The new 4.6 release also adds integration with source-code management solutions including CVS, SourceOffSite and StarTeam . . . Users of Hitachi's SH-4 RISC processor and Accelerated Technology Inc.'s Nucleus Plus RTOS can now obtain a royalty-free JVM from Skelmir LLC. The **CEE-J** J2ME virtual machine is said to scale to under 100KB. Binary distribution licenses start at $50,000 . . . Neon Systems Inc. has released J2EE Java Connector Architecture adapters for BEA Systems Inc.'s WebLogic Interaction middleware. The **Shadow Direct JCA** adapters tie WebLogic to OS/390 applications including the DB2, VSAM, IMS/DB and ADABAS/Natural databases, and also the CICS and IMS/TM transaction packages. The adapters support the final draft of the JCA 1.0 specification . . . MKS Inc. plans to integrate its **Source Integrity Enterprise Edition** software-configuration manager and **Integrity Manager** workflow and process manager with Visual Studio .NET. The tools, which would be accessible from within Microsoft's IDE, are scheduled to be released in the third quarter.

PEOPLE

Robert Dunne has joined Merant International Ltd. as VP of sales. Previously, Dunne managed worldwide sales for RadiSys Corp., a telecom hardware designer . . . META Group Inc. vice president **Will Zachmann** has left the analyst firm, and will be focusing on growing his own research company, Canopus Research . . . **Judith Teson** has joined Nimble Technology Inc.'s board of directors. Teson has sales and marketing experience at IBM Corp., Bachman Information Systems, Prism

▸ continued on page 26

AlachiSoft Generates Database Connectivity Components

TierDeveloper automates access via EJBs, .NET

BY CHRISTINA M. PURPI

AlachiSoft has released TierDeveloper, a tool that scans relational databases and creates JavaBeans, EJBs, Windows or .NET components, which the company claims lets developers more easily incorporate database access into their applications.

According to Iqbal Khan, president of AlachiSoft (www.alachisoft.com) these tools allow developers to choose which database tables and operations they want by accessing the component, rather than having to program and debug the database access code themselves.

TierDeveloper comes in four editions specific to EJBs, Java Objects, .NET components in C# and Visual Basic .NET, or Windows MTS components in C++ and Visual Basic, said Khan. "You also don't have to be an expert in J2EE or .NET, because [TierDeveloper] does so much for you."

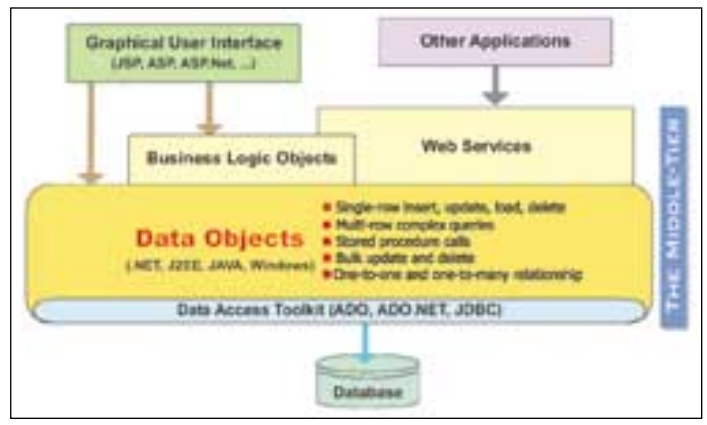
According to Khan, TierDeveloper is similar to WebGain's TopLink and Thought's CocoBase, both for Java developers, but he declined to explain how his product differs from those competitors. He also claimed that TierDeveloper has no competitors in the .NET market.

In addition, TierDeveloper generates a sample Web application, which allows developers to test all the middle-tier code. This process, claimed Khan, generates between 70 percent and 80 percent of the code required to create the middle tier, saving an average of 50 percent of the development time for that part of the application. He also claimed that the components the application developed can handle 7,000 to 10,000 concurrent users and millions of transactions at a time, he said. "Our intended audience is those three-tier applications that handle high traffic."

TierDeveloper also generates design documents in HTML for its data objects, in addition to all SQL used within these objects, noted Khan.

TierDeveloper works with Microsoft's C# .NET and Visual Basic .NET, BEA's WebLogic 5.1 and 6.1, IBM's WebSphere 4.0, Sun's iPlanet 6.0 and JBoss 3.0, according to Khan.

TierDeveloper ships in four versions. Three, priced at $2,495 per developer seat, target applications written in Java, Windows or .NET. The fourth, which sells for $4,995, targets J2EE application servers and can generate EJBs. ▮



AlachiSoft's TierDeveloper allows developers to test all middle-tier code.

Corel Offers DeepWhite Vision

Promises to change way companies, content interact

BY EDWARD J. CORREIA

With a promise to significantly impact the way companies create, exchange and interact with content and with each other, Corel Corp. has introduced DeepWhite, a suite of XML-enabled applications for the creation of text, graphics, data and other content.

DeepWhite also is intended to include process management tools, Web services and components, and a development environment to permit the suite to be customized and extended, according to company president and CEO Derek Burney, who provided the first look at the Seybold Seminars in New York last month.

Burney also offered up a series of predictions about the way companies will interact in the future. "DeepWhite is developing solutions that will revolutionize enterprise content creation and bring together different types into a common, seamless work flow," he said in a statement. Burney spoke of how the convergence of standards-based content and Web services will enable the enterprise to leverage its content to create new revenue streams by placing the "power of XML…directly into the hands of the end user."

According to a company spokesperson, the DeepWhite solutions will add XML capabilities to the company's existing software through the acquisition of SoftQuad Software Ltd. later this month. "We are building from the existing base that we have and the strengths of our graphics capabilities with Corel Draw, our text handling and publishing capabilities" of WordPerfect and Ventura Publisher. DeepWhite also will include Designer, a technical illustration package from the recently acquired Micrografx Inc.

Corel characterizes its XML-based data as smart content, and claims that because it is highly structured, content can be created once and distributed to multiple devices, including desktop and handheld computers and cell phones. The company will reportedly begin releasing the first of the DeepWhite (www.deepwhite.com) offerings later this year. ▮

DB2. software

THE CODERNAUTS WERE ON A SEARCH FOR A DATABASE THAT RUNS ON LINUX®, UNIX® AND WINDOWS® 2000. THEY DISCOVERED:

DB2 *OUTPERFORMS* ORACLE

CUSTOMERS KNOW IT, PARTNERS KNOW IT, BENCHMARKS PROVE IT

business software ibm.com/db2/outperform

IT'S A DIFFERENT KIND OF WORLD.
YOU NEED A DIFFERENT KIND OF SOFTWARE.

DATA JUNCTION

◂ continued from page 1

smaller on a larger amount of points. We're trying to mimic that with a transactional orientation, with the integration working stylistically and technically the way you want to use the application."

The Integration Suite is made up of Data Junction, a tool for designing graphical interfaces; Content Extractor, an interface for automating rules and conditions for data extraction from a variety of data sources; and Integration Engine, which boasts an enriched SDK among other features. Integration Suite 7.5.5, according to the company, has been improved with a SQL graphical query builder, faster load speed for maps with multiple record types, and what the company calls isomorphic mapping, which takes the structure of one file format, such as EDI, and duplicates it in another format, such as XML, with all the map actions automatically defined.

Grosh said 20 new adapters have been added to the suite's Integration Engine, allowing broader connectivity to other systems. Among them are adapters for MySQL, Microsoft BizTalk XDR (XML Data Reduced) schema, Oracle 9i and PostgreSQL. "EAI was about getting applications within a company to talk to each other," Grosh said. "Now it's about getting applications outside the organization to talk to those within."

A new EDI Gen4 Adapter allows for native connections to EDI data and eliminates the need to have a programmer create and debug Content Extraction Language scripts to get at the data. In EDI Gen4, document schemas are generated visually from a new Document Schema Designer, the company said.

The Data Junction Enterprise Edition design tools costs $4,245 for a single user and increases up to $38,795 for a 20-user local network. Content Extractor Enterprise Edition costs $2,145 for a single user. The single-instance Integration Engine Enterprise for Linux and Windows is $4,240 per server, up to $192,000 for a 32-processor server; for Unix, the license is $6,500, up to $307,200 for a 32-processor server. Integration Studio Enterprise Edition, which includes Data Junction and Content Extractor, costs $5,745 for a single user. Studio Plus Enterprise Edition, which adds in a single-threaded Integration Engine, costs $9,145. ▮

Can you change the business logic in
77 EJBs by tomorrow?
why not?

Versata does for business logic what the relational database did for business data.

With Versata you can change the way an account balance is computed as quickly as you can add a database index. Or change the approval process for over-limit transactions just as easily as adding a database table. And know that with each change, your EJB delivered logic is automatically reoptimized and reordered to ensure correct execution across every transaction.

Thanks to Versata, one of the world's largest ERP vendors is allowing their customers to change the business logic in over 800 EJBs whenever they need to.

Declarative Business Logic
Faster. Smarter. Better.

Visit us at JavaOne Booth 1526

versata.

TRIPLEHASH PACKAGES PERL, CGI APPLICATIONS

BY ALAN ZEICHICK

Triplehash cc, based in Port Elizabeth, South Africa, has a new utility that it says allows Web-oriented PHP scripts and CGI-based Web sites to be run on a local Windows desktop.

The Serlient 1.0 application, priced at $125 for one developer seat, creates a single Windows .EXE that combines the Web site and CGI scripts, a small Web server, and calls to Microsoft's Internet Explorer. According to the company, if specific Internet Explorer plug-ins are already installed onto the end user's computer, such as Macromedia's Flash, the Serlient application can also be used to distribute stand-alone applications that use those plug-ins. There is no royalty for distributing the executables. ▮

FineGround Accelerates Web Applications

Condenser 3.0 proxy server rewrites HTML code to reduce complexity

BY ALAN ZEICHICK

FineGround Networks Inc.'s Zack Urlocker says that the solution to slow-running Web applications isn't rewriting them, or putting them onto faster hardware. The answer, says the marketing vice president, is to reduce the amount of Web traffic, and claims that the version 3.0 of his company's Condenser server application is the tool for the job.

"Think about the amount of data sent by enterprise Web applications," he said. There's the relatively constant HTML content, such as text and headers on the pages. There's the embedded graphics, most of which also remain constant. And finally, there's the relatively small amount of dynamic content, which is all that's changed since last time the page was loaded.

Traditional caching technologies don't necessarily help speed up applications, said Urlocker, adding that although they might reduce the amount of consumed bandwidth on the Internet backbone, that bandwidth reduction doesn't always translate into last-mile speed improvements: "The modem and cable modem are the bottlenecks for distributed Web applications."

That bottleneck is exacerbated by the number of page-element requests over the Internet; after an HTML page is downloaded, it might request dozens of different items, such as graphics elements, from the Web server. Many of those elements are tiny, but each requires its own query back to a Web server. Even if all of that data is cached locally, the requests still have to go across the Internet—and that takes time, given the Internet's latency.

Urlocker explained that Condenser is an application that runs on a Linux or Solaris server, located within a company's firewall, but in front of its Web server or load balancers. "It's a proxy server," he said, that dynamically rewrites the HTML code being sent by the Web servers to reduce its complexity.

"It's like an optimizing compiler's rewriting the code to remove unnecessary loops," he said, where the optimizations take several forms: Separating out dynamic content so that local caches can cache more data; changing references to inline graphics and other elements so that the local Web browser no longer needs to interrogate the Web server to see if it's cached; and changing TCP/IP connections to be persistent.

Why should developers care? "Network managers know the applications are slow, but don't know how to make them faster," said Urlocker. "They want the development manager to make them faster, but

▸ continued on page 19

Hit Software to Release Entry-Level Translator

BY EDWARD J. CORREIA

Hit Software Inc. this month was scheduled to release WinAllora Xpress, an entry-level version of its XML-to-SQL translation software that it claims will permit developers to move data back and forth between XML documents and relational databases without writing any program code.

According to the company (www.hitsw.com), the Windows application presents a graphical interface for specifying relationships between XML document elements and relational database columns, or vice versa; developers simply point to the relevant XML schema and database connection. The software reportedly supports OLEDB/ODBC SQL middleware, MSXML, W3C XML schema and DTDs. Once mappings are in place, importing and exporting is accomplished at the touch of a button, the company says.

According to Hit's CEO Giacomo Lorenzin, there is a great deal of need for XML-to-SQL translation. "Database administrators and application developers routinely encounter situations where they need to import or export XML data into or from their relational databases," he said in a statement, claiming that WinAllora Xpress is the first such tool of its kind, and gives developers the capability "without launching a development effort." WinAllora Xpress will be priced at $199 per developer seat. ▮

Map It!
(database tables, java classes, object models)

Generate It!
(Java, CMP / BMP Entity beans, Session Beans, JSPs)

Deploy It!
(to any Java Applet / Application, to any J2EE Application Server)

CocoBase® Enterprise O/R
Dynamic O/R Mapping OPTIMIZED for J2EE and J2SE Customer Success

Ease of Use
Optionally generates all the java code from preset editable code templates optimized for each application server.

Dynamic mapping layer manages the complexities of high performance database access.

Interoperability
Integrated with all of the leading application servers, development environments, and modeling tools.

Works with any JDBC supported relational database such as Oracle, Sybase, Informix, IBM DB2, Microsoft SQL Server, etc.

Cost Reduction
Cuts the cost of database access development by up to 85%, including no more error prone hand coding of Java / JDBC / SQL.

Increases performance by up to 5000% and more, making best use of current resources.

Simply the most successful O/R Mapping Java tool available.

THOUGHT

Download your free copy today
[Contact Sales at (415) 836-9199]
No extra charge per Runtime, CPU or Servers
www.thoughtinc.com

Versant enJin Supports Latest J2EE Specs

BY CHRISTINA M. PURPI

Versant Corp. has released a beta version of its enJin transaction accelerator to provide support for some of the latest J2EE 1.3 specifications such as the Java Transaction Architecture and EJB 2.0 Container Managed Persistence.

Although Sun's Java Connector Achitecture is not supported by the beta version, Chris Caldwell, vice president of marketing at Versant (www.versant.com), said it will be in the final release scheduled for June 1. Caldwell explained that by complying with these standards, enJin 2.3 will simplify the process of developing and deploying J2EE applications. "Implementing standards in enJin was important because many vendors have built proprietary APIs into their product in the absence of the standards. But now that J2EE has both JCA and JTA, it makes sense to offer that to our customers."

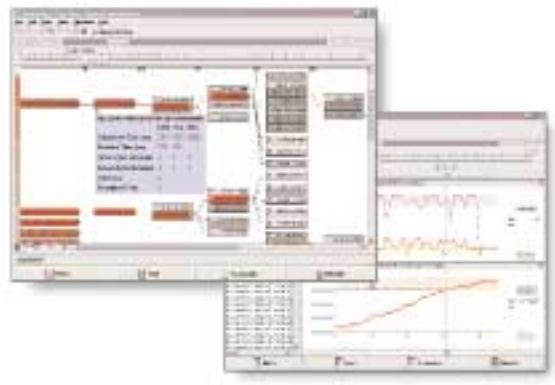
Support of standards was important, says Versant's Caldwell.

The beta currently is available only for BEA's WebLogic 6.1 app server, and is scheduled to be available on IBM Corp.'s WebSphere in midsummer. "WebSphere is not ready for the 2.0 implementation of CMP," according to Caldwell. "We couldn't get the software to build to it." The beta was scheduled to be released the first week in March; pricing was not available at press time. ▮

Innovation in J2EE performance.

sitraka
PerformaSure™

From the makers of JProbe, and leaders in J2EE performance assurance, Sitraka PerformaSure is a diagnosis tool that helps performance teams measure, analyze and maximize J2EE application performance from a round-trip transaction perspective during load testing. Arm yourself with PerformaSure for wide-angle diagnostic intelligence. And isolate poorly performing components before they create costly problems in production.



sitraka
JProbe™

Often the culprit behind performance problems lies within the application code itself. Award-winning Sitraka JProbe gives you a microscopic view of your Java application, right down to the offending line of code. The premier toolkit for performance tuning, JProbe provides deep J2EE diagnosis tools for profiling, memory debugging, thread analysis and code coverage.

For more info visit:

www.sitraka.com/performance/sdt

sitraka

the Java™ advantage

© Copyright 2003 by Sitraka Inc. All rights reserved. Sitraka, the Sitraka logo, JProbe and PerformaSure are trademarks of Sitraka Inc. Java and all Java-based marks are trademarks or registered trademarks of Sun Microsystems, Inc. in US and other countries.
All other products are trademarks or registered trademarks of their respective companies.

PR-Tracker™

Bug tracking doesn't have to be complicated!

PR-Tracker helps manage software development projects by tracking software bugs with problem reports. PR-Tracker records problem reports in a network database that supports simultaneous access by multiple users. Features classification, assignment, sorting, searching, reporting, access control, user permissions, attachments and email notification. Supports easy configuration of data collection and workflow on a project by project basis. Redundant data storage for speed and data corruption recovery.

PR-Tracker Web Client performs bug tracking over the internet or an intranet with the same easy-to-use Windows interface and features of PR-Tracker. Supports anonymous access, authentication control, and secure https protocol.

ProblemReport.asp enables customers to enter problem reports into a PR-Tracker database using a browser. A great way to implement beta test bug reporting or customer support. Customize this web page to collect the data you want and to match the look of your company website.

Download
www.prtracker.com
By Softwise Company

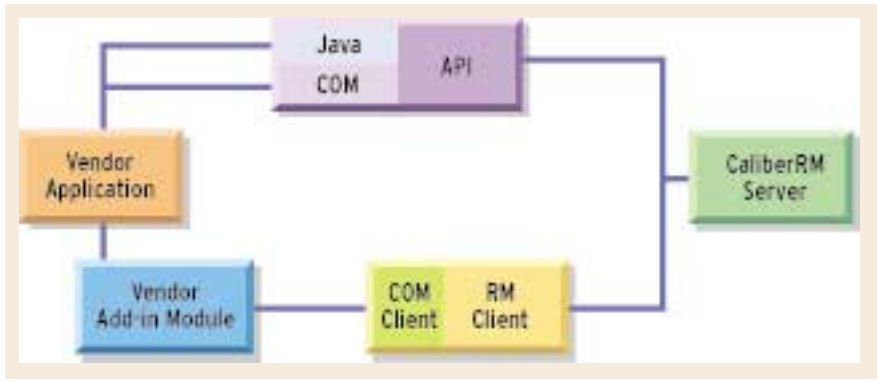
Starbase's CaliberRM Adds Development Kit

BY CHRISTINA M. PURPI

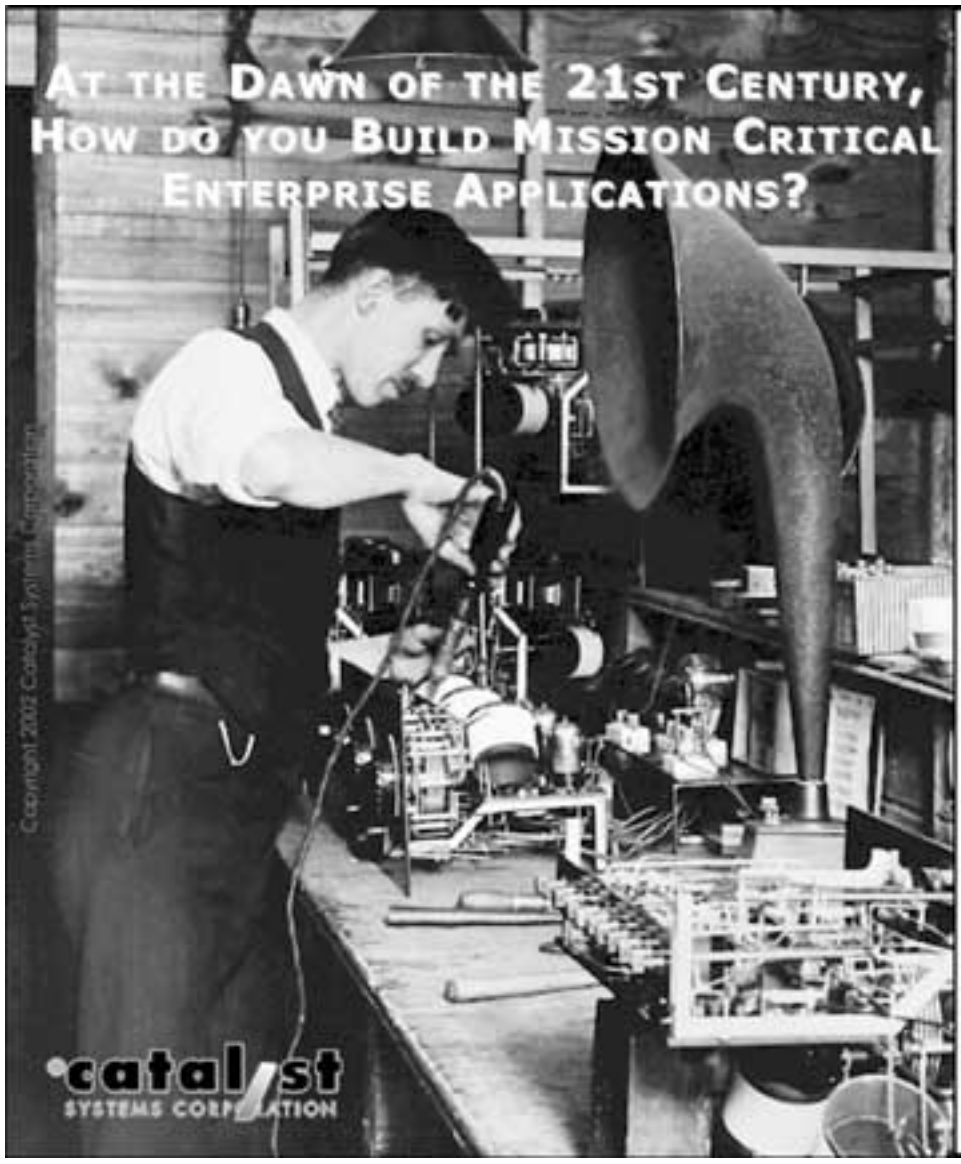
Starbase Corp. has updated its CaliberRM requirements management software to include a new SDK that eases integration between CaliberRM and external applications.

According to Starbase (www.starbase.com), CaliberRM 4.0 will allow companies to increase control over their application development processes to reduce costs and produce higher-quality applications. "The SDK creates interfaces to third-party or home-grown tools such as Rational's Rose, Microsoft's Project and TogetherSoft's ControlCenter," said Jim Azar, vice president of research and development for CaliberRM. "CaliberRM allows vendors and customers to easily tie to other products. All you have to do is pull up a list of objects, drag and create links."

The SDK supports both Java and COM environments. Other changes to CaliberRM include a new requirements-sorting option, simplified installation and more efficient log generation. CaliberRM 4.0 is currently available for $9,999 for the requirements server and $1,499 for each developer seat license; concurrent licenses cost $4,000. A view-only browser-based license costs $399. ▮



COM and Java APIs allow for the creation of traceability links to third-party tools.



openmake
the catalyst for change

Considering the current state of technological revolution, are you willing to risk mission critical production applications by using *make* utilities and procedures that are reminiscent of the industrial revolution?

Openmake is the next step in the evolution of software build management technology. Openmake enables users to implement a consistent and controlled application build environment across multiple platforms using a single browser based user interface.

Driven by a powerful rules engine and knowledge base server, Openmake automates the creation of reliable applications through a standard and repeatable software build process. Only Openmake delivers a single build process for Enterprise applications regardless of IDE, programming language or operating system.

Download a FREE Evaluation Copy

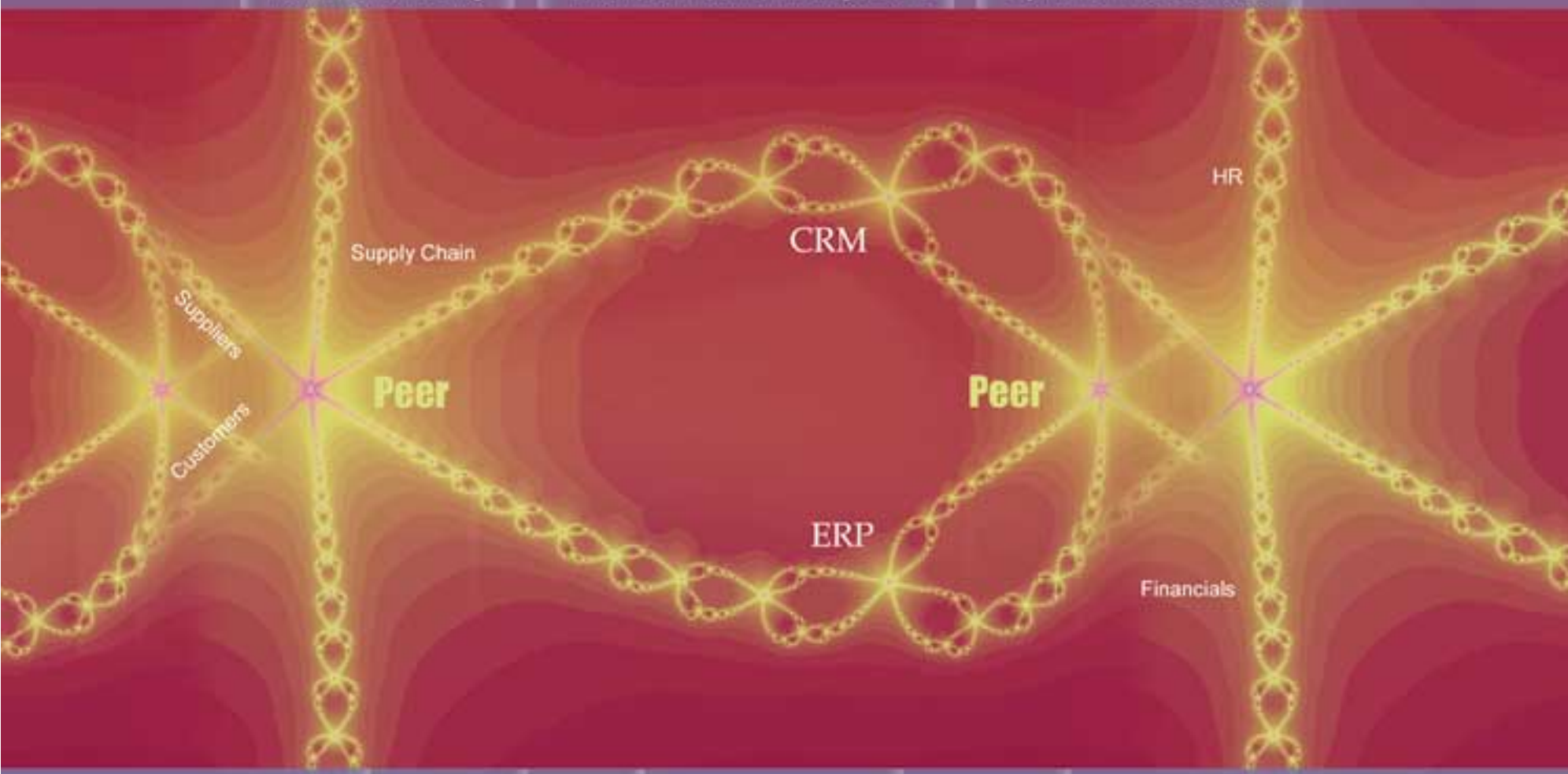
800.359.8049
www.openmake.com
Catalyst Systems Corporation

Introducing

Tifosi®

Next Generation Enterprise Integration

Runtime Monitoring | Business Process Management | Dynamic Web Services



Scheduler | State Engine | Security | Application Repository | Configuration | Presence & Availability

Tifosi is an open, standards-based distributed Services Operating Platform based on the world's fastest and most reliable JMS implementation

- Dynamic Process changes with no downtime
- Real-time Deployment, Monitoring and Configuration Management
- XML, SOAP, WSFL and other standards
- Attractive Licensing options

Download your **Tifosi** evaluation today at www.fiorano.com

Fiorano

Fiorano is a leading provider of standards-based infrastructure solutions to enterprises around the world.

Tifosi is a registered trademark of Fiorano Software. JMS is a registered trademark of Sun Microsystems in the U.S. and other countries.

Meet the Java Developer's Boss

It's the classic midsized enterprise shop: mainframes, minicomputers, Unix and Windows, databases, Web servers. The only new technology is Java. Three years ago, his programmers were experimenting with Java as a cross-platform rapid prototyping language. Today, Java 2 Enterprise Edition has become the company's standard platform for new projects.

That doesn't mean that he's blindly trusting Sun or the Java Community Process. There are a lot of questions surrounding messaging services and the update cycle for the Enterprise JavaBeans specification. And he's not happy with the fact that Sun uses its iPlanet alliance to compete against third-party application server developers like BEA and IBM, because that creates an inherent conflict of interest. It's hard to predict what Sun will do next. Still, the broad industry support behind J2EE has convinced him that the technology is his company's best bet. For now.

His biggest problem is the rapid change of Java-related specifications. New technologies, new approval requirements, compatibility claims — they're flying fast and furiously. That's why the most important part of his job is carefully evaluating and then standardizing on best-of-breed products, partners, and suppliers. There's no way he'll let individual programmers make that type of decision.

The Java publications? Forget those. He doesn't need reams of source code or tips for choosing the right API calls. He needs a wide-angle view of the entire spectrum of enterprise software development, and a rational, balanced outlook on future Java developments. He needs to know the trends, the products, the alliances, the NEWS, and what it all means. That's why he reads SD Times.

SD Times SOFTWARE DEVELOPMENT

The industry newspaper for software development managers

TOGETHERSOFT

◂ continued from page 1

Coad will be focusing on advocacy and writing.

Coad will retain his position as chairman of the board and assume the title of chief strategy officer, where the advocate of software modeling can devote his time and energies to development, writing, speaking and visiting customers, according to a company spokesman, drawing a parallel to the way Bill Gates relinquished the reins of Microsoft to concentrate on software architecture and evangelism.

Vrolyk was formerly president and CEO of storage vendor 3ware Inc.; he had been elected to the TogetherSoft board of directors in October 2001. Prior to 3ware, he held management positions at Xerox Corp., SGI Inc., Quintus Corp. and Arete Systems Corp.

The company said Vrolyk is serving as interim CEO while Coad transitions into his new role; it was not known if or when a wider search for a new CEO would occur.

The company plans a spring update of its flagship Together ControlCenter platform; details were not available at press time.

The company has been adding other industry veterans to its management team, including Donald Fluken, who was named chief operating officer in November; John Sherbin II, hired on as chief financial officer; Todd Olson, Cerebellum Software Inc. cofounder, brought in last summer to be vice president of product development; Gregory Burnell, vice president of North American field operations; and Grace Ueng, vice president of marketing. ▮

FINEGROUND

◂ continued from page 13

developers can't speed up the Internet. This is better than having to rewrite their applications manually," or reduce latencies by throwing hardware at the problem with more or faster Web servers, he added. FineGround claims that Condenser can improve performance of Web applications over the Internet by a factor of 10, and reduces bandwidth consumption by 95 percent. Condenser is targeted at large enterprises running browser-based applications, and where there are many employees in remote offices or working from home, where their network connection is much slower than a LAN-speed connection.

According to Urlocker, the Condenser application (www.fineground.com), which runs on a dedicated server and sells for $50,000 per processor, takes care of all the optimizations automatically and does not require any browser plugins. "It's just HTML," he said, adding that during repeated serving of specific pages, the Condenser figures out which are the static parts of the pages and which are dynamic, and rewrites the dynamic portions using DHTML. He also claimed that the Condenser server can detect the type and version browser the client is using and add additional optimizations as appropriate.

Urlocker hinted that the next release of Condenser would have additional optimizations for dynamically compressing graphics files, as well as for optimizing Web content for different types of wireless devices. ▮

DATA-CENTRIC

◂ continued from page 1

to allow for data views to be collaborative, Presence-AR allows developers to make the data collaborative so that the application becomes the local window into the data.

Using an example of changing data in a spreadsheet application, Ruths explained the Presence-AR framework is used to create a data representation, or object model, built around the data to be used. In this case, a data representation of an abstract spreadsheet would be created, with cells, rows and columns.

Within the spreadsheet, data interaction occurs through the use of adapters, which provide communication between the application and the data representation. Presence-AR handles the collaboration infrastructure, allowing changes to be reflected on multiple machines logged in to the work session, with multiple levels of control. Someone using Microsoft's Excel would change data in column A, row 1, for example, while someone accessing the data through Lotus' 1-2-3 would see the change represented differently. "The application is the user interface to the data," Ruths said.

A data representation is key to collaboration, says Ruths.

Because only the data is shared, with the applications running locally, bandwidth requirements are very low, according to Ruths.

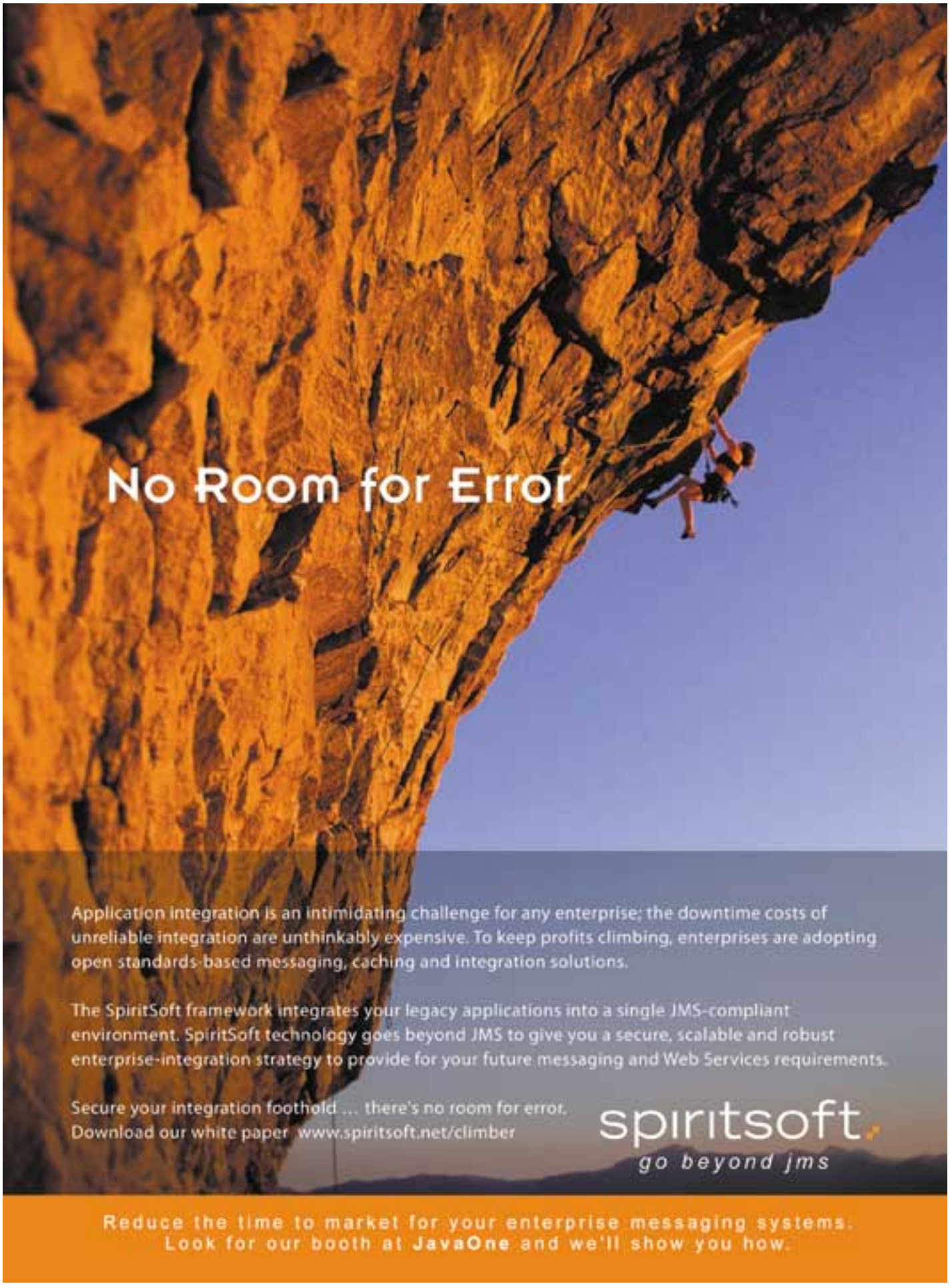
As the data changes occur in real time, Ruths said, one of the big benefits of Presence-AR is increased speed of development of projects, across vertical domains such as software development, CAD environments, finance and manufacturing.

Imagine a car company, said marketing vice president Brian McGrath. "If a car designer changes a bumper, the crash tester immediately sees the impact, and the finance department immediately sees the change in cost." In application development, if a business manager alters the business rules, the programmer can immediately see the effect on the application and where changes need to be made, he said. The problems of asynchronous updates, such as repetitive review cycles and conflicts in data changes, are eliminated.

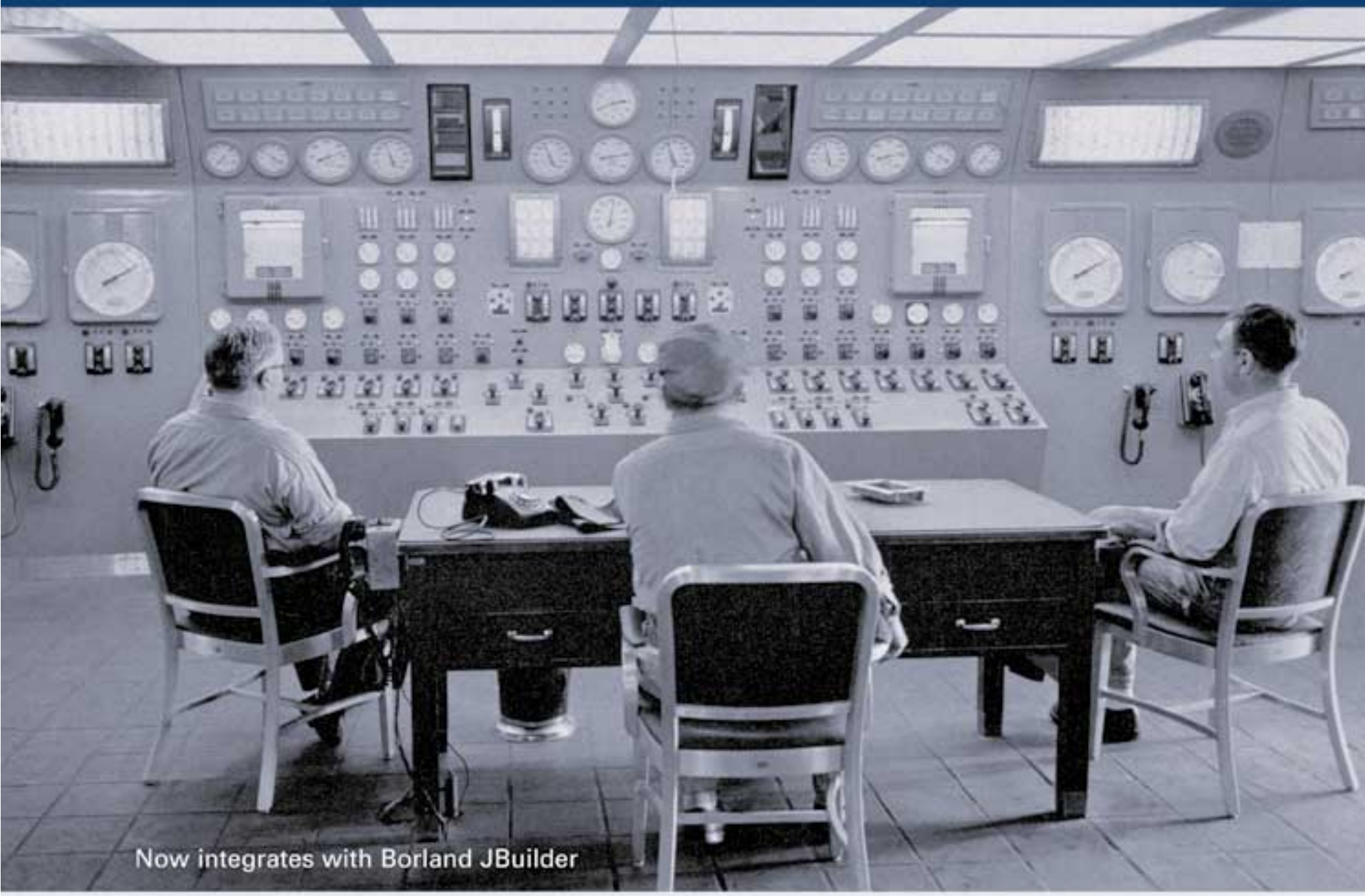
Ruths said Presence-AR allows the history of changes to data to be tracked, permits one member's changes to be undone, and synchronizes the changes during the "save" process. Presence-AR also adapts the data views to the capability of the accessing device, Ruths claimed.

"Most collaboration tools are limited to the lowest common denominator," he said. "If everyone is on a T1 line and one guy is on a 56K modem, all the data is moved at 56K." Presence, he said, allows collaboration through multiple connection protocols and "will run in Pocket PCs to supercomputers, providing cross-platform collaboration in heterogeneous hardware environments."

The company (www.advancedreality.com) plans to release an SDK later this year to allow companies to create their own collaborations and to develop new applications that are collaborative; currently, Advanced Reality developers go on-site with customers to set them up. "We're new and trying to prove this new data-centric approach to collaboration," said McGrath. ▮



You could buy our competitor's software development tools, but then you would have to use them.



round-trip ER/UML modeling with ER/Studio®

real-time team collaboration

integrated modeling and development environment (IMDE)

Where is it written that a program has to be hard to use just because you want to speed up your software design and collaborative development efforts? The fact is, it doesn't. Embarcadero's Describe™ gives you all the benefits of the UML (Unified Modeling Language) without having to subject your team to some complex, overpriced and totally inflexible application development tool.

That should be a huge relief. After all, your tools should eliminate complexity, not add to it. Describe simplifies analysis, design and application implementation for organizations working with Java, C++ and IDL. With features that include seamless integration with popular IDEs like Sun™ Forte™ for Java™ and Borland® JBuilder,™ real-time team collaboration, and round-trip ER/UML modeling, Describe streamlines any design, development or application re-engineering effort without forcing people to change the way they like to work.

Simpler really is better. For more information, or to download a free evaluation copy, visit **www.embarcadero.com** today.

EMBARCADERO TECHNOLOGIES®

© 2003 Embarcadero, the Embarcadero Technologies logos and all other Embarcadero Technologies product or service names are trademarks or registered trademarks of Embarcadero Technologies, Inc.
All other trademarks or registered trademarks are property of their respective owners.

Hewlett-Packard

WebGain

Some things are just meant to be together.

Hewlett-Packard and WebGain have teamed up to simplify the creation and deployment of mission critical, e-business applications to HP Application Server 8.0 (HP-AS). The integration of WebGain VisualCafé and TopLink provides optimized performance on HP-AS and delivers an open, standards-based architecture streamlining application deployment. TopLink, the industry leading Java to data source integration solution, can help your company dramatically reduce development time and cut costs on application maintenance.

For free HP-AS 8.0 download and WebGain trialware, please visit
www.webgain.com/hp_sd3.html or call 1-888-859-6320

Come see us at JavaOne.

hp invent

webGAIN

©2002 WebGain, Inc. All rights reserved. VisualCafé and TopLink are trademarks of WebGain, Inc. HP Application Server is a trademark of Hewlett-Packard Company.All trademarks or registered trademarks are property of their respective owners.

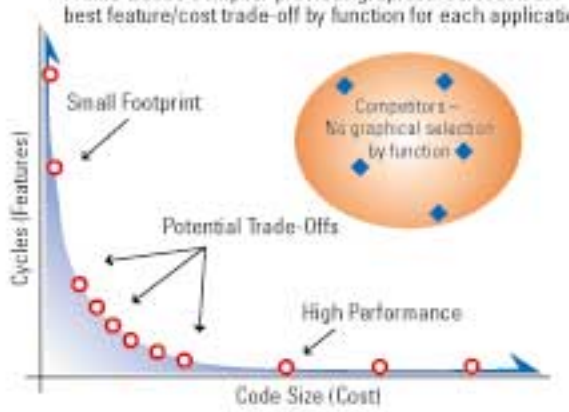
DSP™
TEXAS INSTRUMENTS
TECHNOLOGY

Maximize performance, minimize code size. C Compiler/Optimization Tools from TI.

Get more out of your DSP code and get to market faster. TI's C Compiler/Optimization Tools for eXpressDSP™ software balance code size and performance to meet the demands of your application.

- Advanced profiling highlights performance-critical areas to enable code tuning
- Goal-focused optimizations for code size and performance
- Intuitive user interface shows available trade-offs between code size and performance
- Compiler feedback and solution table provides recommendations for C code performance improvements
- Save time with automated, trial-and-error tuning
- Developed in concert with TI's DSP platforms, available with Code Composer Studio™ IDE with full C, C++ support

Profile-Based Compiler provides graphical selection of best feature/cost trade-off by function for each application



For more information, including a compiler optimization tutorial, free evaluation tools, and on-line training, visit www.ti.com/sc/compiler

eXpressDSP, Code Composer Studio, the DSP logo, and the red/black banner are trademarks of Texas Instruments. SF-2300

© 2001 TI

THE WORLD LEADER IN DSP AND ANALOG

TEXAS INSTRUMENTS

XScale Grabs the Spotlight

New processor takes center stage at Intel Developer Forum

BY EDWARD J. CORREIA

At the Intel Developer Forum held in San Francisco late last month, several companies rolled out new products and initiatives centered around XScale, **Intel Corp.**'s new processor microarchitecture core that saw its first silicon for wireless applications weeks earlier.

Intel's PXA250 and PXA210 are 32-bit processors available in speeds between 200MHz and 400MHz, and potentially consume about half as much power as their predecessor, the SA-1110 StrongARM processor, Intel said.

Standard to both new chips are separate 32KB data and instruction caches, a 2KB cache for data streaming, 100MHz memory bus, a 16-channel configurable DMA controller, an integrated LCD controller, USB and Bluetooth interfaces, and a host of serial interfaces. The two vary on the number of interruptible I/O ports and memory banks. The PXA250 can address either 16- or 32-bit dynamic and static RAM; the PXA210 is limited to 16-bit memory.

The CE .NET compiler is optimized for XScale, says Microsoft's Horn.

Sean Maloney, executive vice president and general manager of Intel's Communications Group, stressed to developers the importance of building devices using a modular approach, and to "embrace a more rapid and cost-effective design approach."

The company has introduced a family of programmable network processors—also based on XScale—that it says perform as much as 16 times faster than the company's previous offerings. The new family reportedly includes the IXP2800 for network core applications such as switches and routers, the IXP2400 for edge devices, and the IXP425, designed for DSL equipment for consumer and small business applications. The processors are part of Intel's Internet Exchange Architecture communications equipment building blocks.

At the conference, **ARM Ltd.** (www.arm.com) introduced the RealView Developer Kit, an integrated development environment that it said can be used to target all ARM-compliant architectures based on XScale. The kit reportedly includes C/C++ compilers, a macro-assembler and linker for XScale, ARM's AXD debugger with on-chip trace, a JTAG debug interface and the ARM Firmware Suite with support for developer boards. Scheduled for released in April, the kit is priced at $6,500.

Development tools maker **Metrowerks Corp.** (www.metrowerks.com) unveiled a wireless strategy centered around CodeWarrior Wireless Studio 1.0, the latest version of its IDE. According to Metrowerks, Wireless Studio will target a broad range of ARM-based processors including XScale, parent company Motorola's DragonBall MX1 as well as Motorola's i.250 and i.300 multi-core designs, and the Texas Instruments OMAP multi-core processor.

According to Gerardo Dada, senior product manager for wireless technologies at Metrowerks, the tools will initially include ARM's compiler, with an enhanced Metrowerks-built compiler for ARM to follow later this year. "When we release our compiler it will have optimizations for [XScale] and MX1, and support their libraries and other cores they might be including in future systems." ARM's processor emulation is optional. The company said it will release Wireless Studio sometime this month, but pricing was not disclosed.

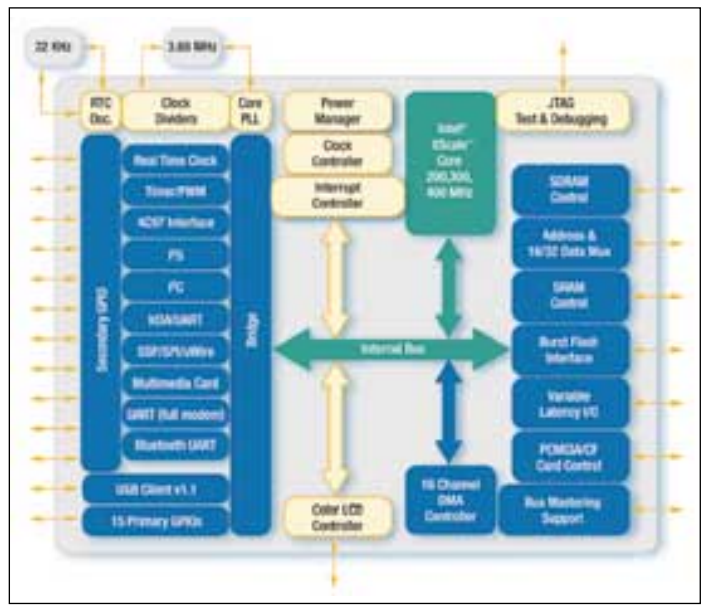
Microsoft Corp. said that it released a version of the Windows CE .NET kernel and an optimized compiler for the XScale architecture and develop board support packages (BSPs) for the PXA250 and PXA210.

According to Scott Horn, director of Microsoft's Embedded Appliance and Platform Group, the compiler will be tailored to suit the way XScale enhances application performance. "We've added support for some XScale instructions on the compiler and optimized the way we schedule instructions to better match the way the XScale pipeline works. So the compiler can actually put things in a certain sequence that takes advantage of the way the chip architecture runs," he said.

The chip is available in 200, 300 and 400MHz speeds.

Horn also said that including the BSPs will help reduce development time. "Developers will not have to worry about bringing up the operating system on a board based on a PXA board." Pricing of Platform Builder for Windows CE .NET will remain at $2,995, Horn said, adding that the PXA BSPs will also be included with the free evaluation version (www.microsoft.com/windows/embedded/ce.net).

Wasabi Systems Inc. (www.wasabisystems.com) has released a version of its NetBSD open-source operating system that it says supports Intel's XScale-based IOP321 I/O processor board. As a result, NetBSD now offers accelerated performance of software RAID and supports on-board monitoring for storage applications. ■



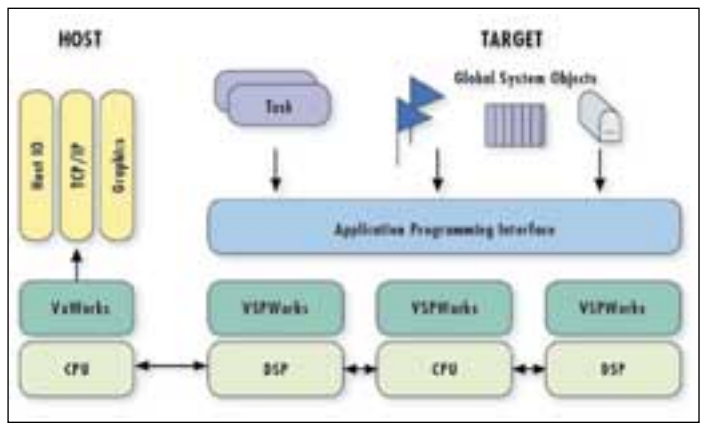
The PXA chip architecture offers as many as 17 interruptible I/O ports.

WIND RIVER

◂ continued from page 1

on single or multiple DSPs, CPUs, cores and FPGAs, in any combination. By employing a so-called virtual single processor model, it treats all system processors as a single individual processor, transparently to the developer.

This greatly simplifies the development process, Noyes said. "This permits developers to think of their applications in terms of system objects rather than as individual tasks," he said. Developers no longer need to manage where tasks execute, he explained; the kernel takes care of this, as well as all interprocessor communications. "One of the benefits is that you can scale your applications up or down," to take advantage of more powerful processors or to add processors to an existing system if needed. "Applications will run on the scaled systems with no change to the source code."



VSPWorks provides a framework to enable embedded devices to exploit services of other networked devices running VxWorks.

Noyes said that traditionally, developers manually divide application tasks among available processors. "That approach works but it takes longer to develop and it's not portable. If I want to add a processor to an existing design, the application needs to be rewritten." While he admitted that there is overhead that comes with hardware abstraction, Noyes contends that the portability it affords is often worth the trade. "DSP developers who have traditionally used assembly language to program their systems are now quite willing to accept using a C compiler and to adopt a real-time operating system because of these benefits. And you don't necessarily need prior embedded or DSP expertise to develop simple applications with DSPs and CPUs," he claimed.

Though there are no logical limits on the number or combination of processors in a design, Noyes cautioned that developers should be aware of physical communications restrictions that can occur as systems scale to encompass many processors. "Ultimately there will be a system bottleneck, whether it's a bus that connects several nodes together or processors that will be contending for shared memory. But some customers are using the [Virtuoso] kernel in systems that combine over a thousand DSPs in a single system. So it scales quite well," he said.

The software is scheduled for release in April, and will include the VSPWorks kernel and a graphical IDE that will be replaced when VSPWorks is integrated with the company's Tornado development tools later this year. Pricing had not been disclosed at press time. ■

News Briefs

MORE PEOPLE

◂ continued from page 6

Solutions and Net Perceptions . . . Novell Inc. has appointed **Christopher Stone** as its new vice chairman. Stone had served as Novell's executive VP for strategy and development from 1997 to 1999 before starting Tilion Inc., which develops supply-chain management software. Stone was also a founder of the Object Management Group. Stone will continue to serve as chairman of Tilion . . . **Ram Gupta** has joined the board of directors for VA Software Corp. Gupta is executive VP of products and technology at PeopleSoft Inc.

STANDARDS

The National Committee for Information Technology Standards (NCITS) has renamed itself the International Committee for Information Technology Standards (INCITS). An organization accredited by ANSI, the group was originally formed in the 1960s under the name X3 . . . The W3C has published a Last Call Working Draft of **Media Queries for Cascading Style Sheets**, which proposes a registry of media types, and a Last Call Working Draft of **XForms**, which provides a new interface claimed more flexible than HTML and XHTML forms. The group also has updated its Working Drafts for **DOM Level 3 XPath** and **DOM Level 3 Events**, and has offered the first Working Draft of the **Quality Assurance Framework** . . . The Java Community Process is now offering the second public draft of the **Java API for XML-Based RPC (JAX-RPC)**, which shows how to use the API with SOAP and WSDL. The JCP also has a proposed final draft of the **J2EE Deployment API Specification**, which seeks a common way for letting any Java tool load applications onto a J2EE-compliant app server. ▮

iLogix Releases UML Tools for Ada

Adds automatic test generator to Statemate app analyzer

BY EDWARD J. CORREIA

Embedded development tools company iLogix Inc. has released Rhapsody in Ada, a version of its UML modeling tool that it says enables Ada developers to create real-time embedded applications visually using Unified Modeling Language diagrams.

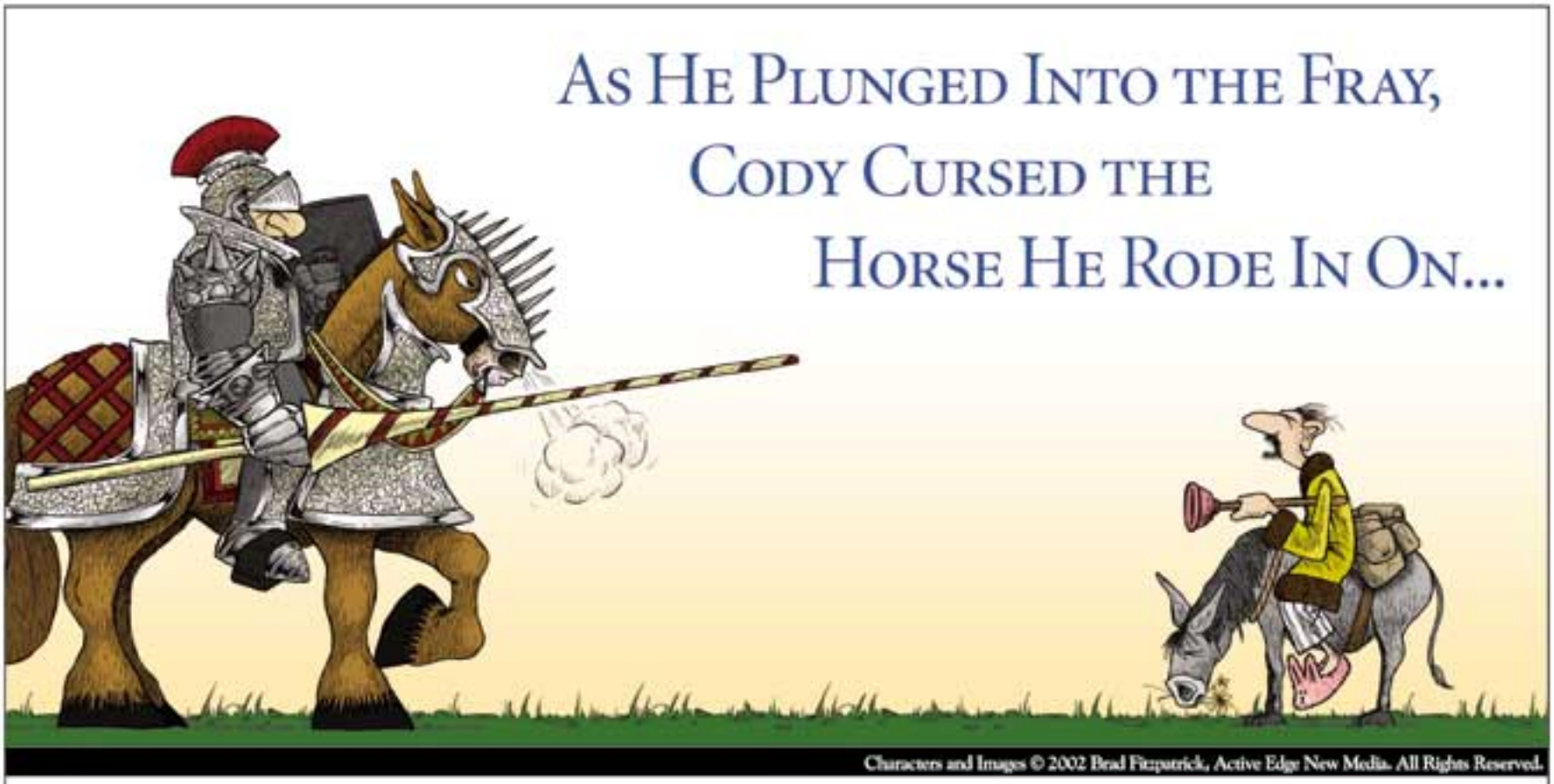
According to Jim McElroy, director of Rhapsody product marketing at iLogix (www.ilogix.com), the Ada version shares the same user interface and collaboration capabilities of the company's Rhapsody tools targeting other languages. "Everything that comes in Rhapsody 4.0, including the look and feel, Web-based collaboration, UML diagrams and full production-quality code generation, is consistent across all of our products." Ada is most commonly used in military, aerospace and transportation applications.

McElroy claimed that Rhapsody in Ada also brings some functionality not in the others, including rules-based code generation. This is of particular significance to Ada users, he explained, because of special requirements set down by the government agencies that the language commonly targets. "We'll be able to support Ada83, Ada95 and any of Ada's subsets." Another benefit is the ability for developers to tailor the code generator itself. "You can work with the rules editor to create new rules for a code generation strategy, and essentially create your own code generator."

Rhapsody in Ada shares features with other versions, says iLogix's McElroy.

But McElroy admitted that Rhapsody in Ada lacks a few significant features found in its counterparts, such as round-trip engineering—that is, the ability to dynamically update UML models when changes are made to source code, and vice versa. The other is design-level debugging, which McElroy said lets developers animate the UML diagrams during application execution, either on the host platform or on the target. "It shows you at the design level what's going on in your application during runtime." Both features are planned for future releases.

iLogix also has released Statemate Magnum Automatic Test Generator, which McElroy said permits developers to capture application requirements using UML use case diagrams and use them to build UML sequence diagrams. "With Statemate you'll be able to design your system's functionality using the traditional functional modeling techniques." Those models can be used to define usage scenarios, which he said then become the test harnesses for Rhapsody apps. McElroy said that Statemate works with all Rhapsody products, including Rhapsody in Ada. ▮



Try TotalView FREE at www.etnus.com

Don't battle complex code without the essential equipment! Etnus TotalView is the debugger that helps you find even the most elusive problems quickly, even in heavily threaded applications. Available on UNIX and Linux platforms.

Etnus TotalView... *The Debugger for complex code.*

ETNUS TOTALVIEW

Empower

...with Outside In
Document Conversion
and Viewing Technologies

Empower your mobile, desktop and server applications to view, access or convert more than 225 file formats on multiple platforms with Outside In Technology.

More than 350 development organizations worldwide trust Outside In to bring the power of information to their products.

Attend a free webinar,

register at www.stellent.com/oidemo or call toll free 866.604.8372

OUTSIDE IN®
A STELLENT PRODUCT

Viewer Technology | Content Access | Wireless Export | HTML Export | XML Export

COTS FAA DO-178B Level A Certification!

Conforms to the ISO Ravenscar Profile Standard!

ObjectAda/Raven provides a Full Development Environment!

ObjectAda/Raven provides a Full Set of Testing Tools!

Please visit us at ESC booth # 2513S
Contact us at: www.aonix.com/SDTimes

Aonix®
Making Ideas a Reality.

Enterprise Apps Are Going Mobile

Helping developers build apps that are frugal, fast and foolproof

BY EDWARD J. CORREIA

Your company has spent millions of dollars to amass, process, warehouse, and mine its corporate data. Two years ago, you created intranet and Internet Web sites that allowed access to some of that data; last year, you set up information portals that let individual users aggregate data onto their Web browsers. Now, for a new challenge: Mobilizing that data, securely and inexpensively, so that it's accessible to wireless clients anywhere in the world.

Kirk Wolfe, CEO and founder of custom handheld software developer Enterprise Mobility LLC (www.enterprisemobile.com), builds mobile solutions for businesses. Surprisingly, he said that his greatest challenge lies not in designing the applications, but in getting cooperation from people within the company. "Many times, the people who manage and support those systems are not the same people who are trying to extend the data to the field," he said. "Getting information and the resources required to integrate with their legacy systems is always the biggest hurdle."

But before any project gets off the ground, Wolfe said it's important for developers to get cooperation from the keepers of the legacy data, and that having one department looking to mobilize is no guarantee others will share the enthusiasm. "From what I've seen, it's just the opposite. People who are trying to mobilize the data and see the return are thrusting forward. But people who maintain the systems where the data resides are not interested at all; it's just a lay-on for them."

Wolfe said that his typical customer is collecting data in the field that would normally be collected and circulated first on paper. "In almost all cases the application involves getting data from a collection device into their legacy system," he said, a manual process that is anything but real-time. "Everybody wants to do wireless, but when you get down to the nuts and bolts of it, a lot of the back-end systems are not real-time anyway; a lot of them are batch mode. So you could spend the money transmitting the transactions as they happen, only to have the data sit on the legacy system until that night when the batch run happens."

Wolfe said that it's not uncommon to find companies whose manual systems take five to seven days to update data. That's a system that can be usually be improved without significant cost. "When we go to a data collection device even with a dialup connection, you usually get updates within 12 hours or an hour with wireless," he said. But often when customers see the charges associated with wireless communication they back away. "Is getting the data in one hour instead of 12 worth the added cost? Not always. So the need for real-time data flow is evaluated case by case," and synchronization is offered as an alternative.

Rob Veitch, director of business development at Sybase Inc.'s iAnywhere subsidiary, said that regardless of the communications method, synchronization is still the best option for transaction-based applications, citing e-mail as an example. "E-mail uses synchronization because it is fast, responsive and leverages the computing power of the device," he said. "As PDAs begin to outnumber desktops, the server-only model will not work." Veitch added that applications must have a means of dealing with periodic service outages. "There will always be caves, tunnels and other areas that lack coverage."

Synchronization is the best option, says iAnywhere's Veitch.

But despite advances in wireless technology, Veitch said the creation of mobile enterprise applications has been slow. "Grab any employee off the street and he's probably using paper and a clipboard." He attributed that to the fact that adequate solutions are not being presented to the right people in the right way.

And the right way, Veitch said, is to present solutions in terms of return on investment. "Companies spend hundreds of millions of dollars" on mobile solutions, adding that the efficiencies of automation can bring ROIs of about a year or even less.

Enterprise Mobility's Wolfe agreed that ROI is important for justifying any mobile project, and that documenting costs of the system to be replaced is a critical component of tracking the ROI. "That's difficult because it's a lot of paperwork. But if you document current and future costs during the pilot period, then you come back with some real data that might say 'we save 20 minutes per person in the field by having this data at

▸ continued on page 30

GOING MOBILE

◂ continued from page 29

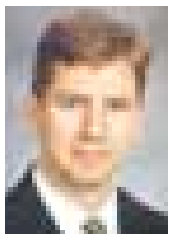
their fingertips.' Then you can document the productivity gain."

To help spur IT interest, Wolfe suggests getting a small piece of the project up and running quickly. "There's been a lot of selling out there and not much product delivery, so customers are cynical about what you tell them. Where we've had success, we have gotten a rapid prototype, that's the most effective sales tool. Once we have a collection or delivery solution working, it's easier to get them to buy in."

AN APP DIVIDED

One way to help speed mobile applications development is by leveraging middleware. Extended Systems Inc. (www.extendedsystems.com) with its XTND-Connect Mobile Objects middleware claims to do just that. According to John Carter, product manager for XTND-Connect, the software lets developers use their existing COM-object program code and effectively split applications into interface and server logic components in very little time.

"Most of the development products we've seen out there are difficult to use and take a long time to develop," said Carter. "And if you talk to developers that haven't done any mobile app development, they say [they] really have no idea how to do it." But Carter claimed that COM developers already know how to use XTNDConnect. "If you're a VB [Visual Basic] or C++ developer, you really don't have a learning curve. You just write or use an existing COM object, write the client interface in Visual Studio, AppForge or CodeWarrior, and you're up and ready to test."



Existing COM objects can be mobilized, says Extended Systems' Carter.

Carter explained the process, which starts with a copy-and-paste operation. "You paste your [COM or COM+] code into our framework. Then you use our code generator to create the code that handles interaction between the handheld device and the server. Developers sometimes refer to that as the stub." The next step, he continued, is to build the client interface, which is accomplished with a combination of wizards and the developer's existing Visual Studio, AppForge, CodeWarrior or other development environment for the target device.

What the developer ends up with, Carter said, is "an interface on a Pocket PC or Palm OS client that interacts with a COM object on any server running Windows." The benefit of this solution, he said, is that "there's no API to learn, and there's no local processing taking place on the client." Interface

▸ continued on page 32

The Office Hits the Road

Companies make it easier to access from the field

BY EDWARD J. CORREIA

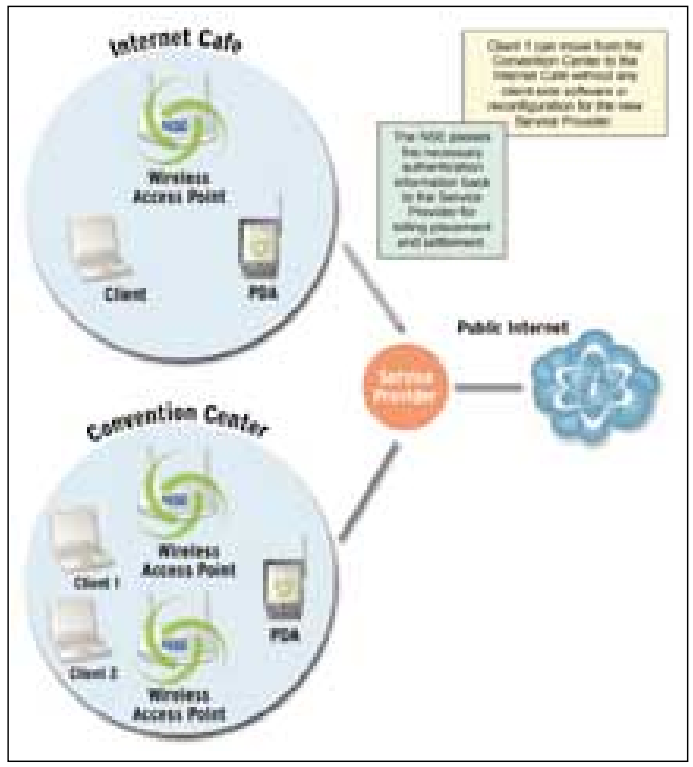
Many companies employ people who travel between the office and client sites – time taken up by travel that could be spent on other tasks. Now, several companies are developing ways recoup some of that lost productivity by making enterprise applications more accessible from the field.

"IBM is getting involved in the automotive computing platform because once it becomes connected to the rest of the networks, it becomes relevant," said Raj S. Desai, worldwide director of automotive solutions at IBM Corp. Through the company's pervasive computing solutions group (www-3.ibm.com/pvc), IBM is developing telematics, a term the industry is using to identify an emerging market that links mobile computing devices with a user's location, and delivers applications accordingly. "Now for the first time you have a computing platform in the car and that time can be used

"Automobiles are being seen now as mobile offices," said Alec Saunders, vice president of marketing at embedded developer QNX Software Systems Ltd., which has developed a telematics solution that combines its RTOS with IBM's ViaVoice software, which Saunders said will help reduce driver distraction by enabling application operation using voice commands.

According to Saunders, some of the telematics applications in use today tap into global positioning systems to help farmers spread fertilizers and to provide load logistics and management for commercial delivery vehicles. Desai said other early adopters will be the automotive industry for vehicle diagnostics and failure detection, and corporations for CRM and sales force automation applications. Sales people could scan customer or prospect information immediately prior to calls and add to the file afterwards.

Some of the challenges, Desai said, involve communications, particularly when creating applications that need to operate nationally and to seamlessly handle interruptions in service "GSM[Global System for Mobile Communications] is a standard in Europe, so it's not as big a problem. But here in North America, we use several [communications protocols]. The way to deal with this is perhaps to have a couple of communications mechanisms, some for low data bandwidth, some for high. It all depends on the cost. At a minimum you will have to have one service provider that has reasonable coverage across the board." Most domestic wireless carriers will address this problem when they migrate to so-called 3G networks, which will be designed to interoperate. Angus McIntyre, product manager for IBM's embedded Java, said that IBM's answer to intermittency of service will be with DB2 Everyplace for local storage on the device, and Message Queuing Everyplace for the server. "As a car enters a tunnel [for example], DB2 Everyplace will queue up your transactions and complete them when you exit the tunnel," he claimed.



Nomadix software maps network settings as necessary for roaming.

Embedded systems developer Nomadix Inc. (www.nomadix.com) claims to simplify some communications problems. It offers gateway software for wireless Ethernet access points that it claims allows mobile executives with 802.11 and a Web browser to access to corporate applications via the Internet.

Only a client browser is required, says Nomadix's Hayes.

Greg Hayes, vice president of marketing at Nomadix, said the software detects wireless users as they come into range and automatically translates their settings to suit the local network; no user intervention is required. Incoming users are diverted to a login page for authentication, and can then access corporate applications, data and e-mail using a VPN connection. Hayes described one location-based service in use today. "At the Hong Kong airport, before you've authenticated, you can get into a 'walled garden' environment where you can find flight information, local shopping and other services available in the airport."

Though difficult to achieve, ease of use is critical to the successful deployment and broad acceptance of mobile enterprise applications, said IBM's Desai. "But the easier applications are to use, the more difficult they are to implement," he said. ▮

Roaming wireless browsers are diverted by Nomadix software to be authenticated.

The art of hiding a database in plain sight.

It's self-administering. It's self-tuning. Most users will never even suspect there's a database there. That's the real beauty of SQL Anywhere Studio. It eliminates the need for database expertise at remote sites. Yet it delivers all the power and functionality your users need. Because SQL Anywhere Studio is specifically designed for embedded applications, configuration and installation are seamless.

Bidirectional synchronization and local data management ensure both transactional integrity and data that is "always available" to your users.

And despite its small footprint, SQL Anywhere Studio scales up to multi-CPU systems. It works on Windows, Linux, Unix, Pocket PC, Palm and NetWare. And standing behind this "hidden" database is a very big name: iAnywhere Solutions, the world leader in embedded and mobile databases with more than six million users and 600 embedded application partners. Check out SQL Anywhere Studio yourself. We've made it easy to find at www.ianywhere.com/hidden.

iAnywhere™ SOLUTIONS A SYBASE COMPANY

©2002 iAnywhere Solutions, Inc. All rights reserved. iAnywhere Solutions, SQL Anywhere and Sybase are trademarks of Sybase, Inc. or its subsidiaries. AIAIWC1

GOING MOBILE

◂ continued from page 30

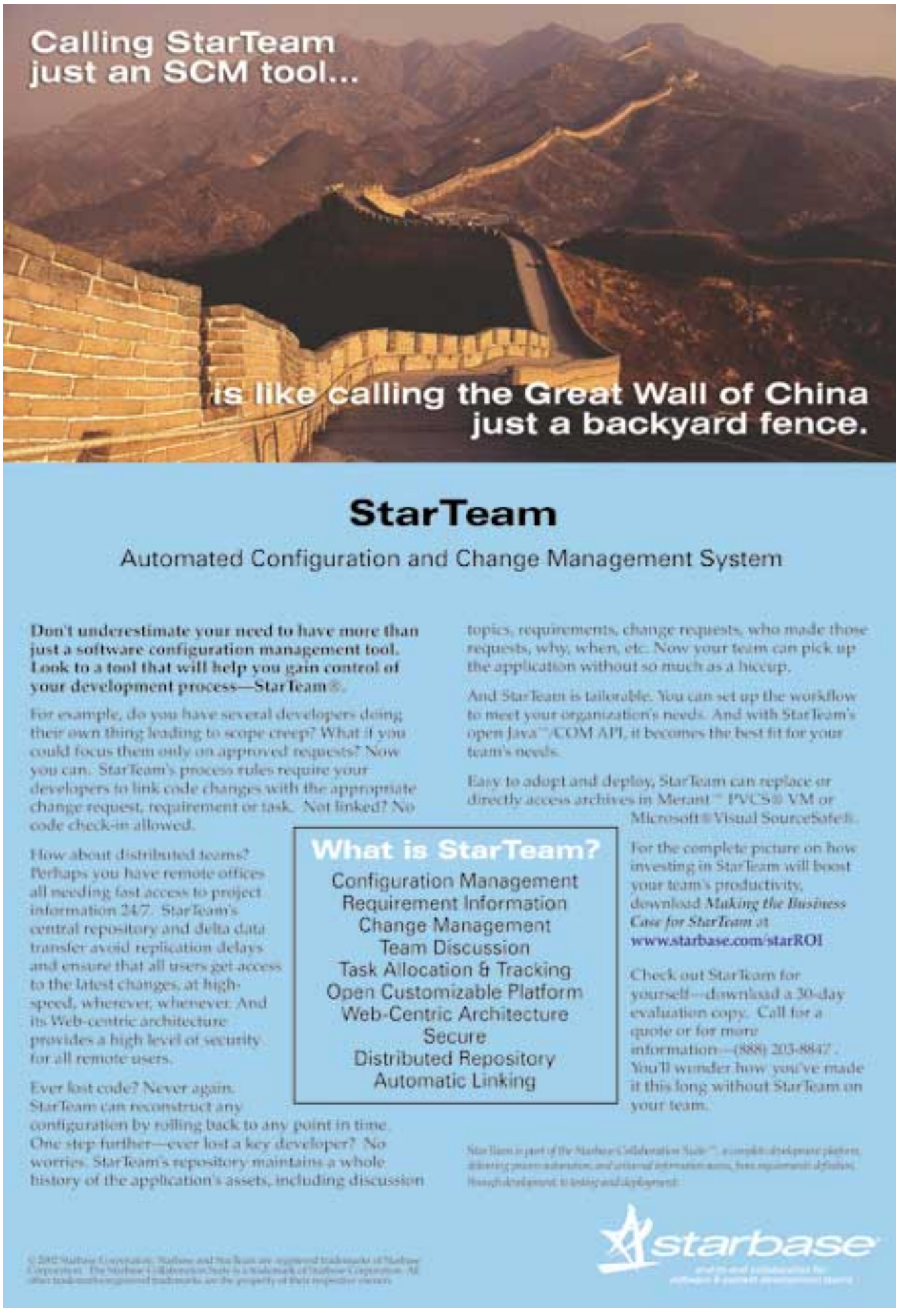
files typically are about 150K, plus any local data storage, he said.

Carter claimed the solution also handles lapses in wireless coverage. "Our security puts a session-less key on the device at log on, so that when you lose and regain a connection, you're instantly reconnected [to the application]. If you lose your connection and come back up, you don't have a typical handshake to go through."

Still, according to Enterprise Mobility's Wolfe, it may be preferable to choose a synchronization solution to optimize expensive connection time. Enterprise Mobility uses iAnywhere's solution, which Wolfe said offers benefits above service drop-out protection. "What it brings is a true database on the handheld device. With that, you can store and quickly retrieve the data. And instead of transmitting the entire database, you can [send] record-level changes, which significantly decreases your connection time."

The downside to iAnywhere, however, is the requirement to develop a native database for each client device. So why not use Java for the client-side database, which can be reused from device to device? "We looked at Java a number of times," said Wolfe. "The issue we've had on a handheld device is that Java is slow. If it takes more than three or four seconds to collect the data, odds are it's not going to get collected."

Wolfe added a few other tips for developing a successful mobile application. "It's gotta be simple. Many industries have high turnover," and new hires must be able to learn the application quickly. And performance of the application itself must be snappy. "Sometimes they only have a few seconds to get the information, so what they're doing with the handheld needs to be quicker than writing it down."



FINAL EXAMS

Reliability is the cornerstone of any successful field application. But accurate testing can be difficult and time-consuming, particularly with applications destined for carrier networks. Software development tools maker Metrowerks Corp. has an answer: labs where developers can go to test their applications for CDMA, GSM and GPRS cellular networks.

Gerardo Dada, senior product marketing manager for wireless technologies at Metrowerks (www.metrowerks.com), said the labs give developers something they can get nowhere else. "Developers can come here and test their devices in a live controlled environment, using the same facilities as in the real world. They can also test and tweak their applications on multiple devices and with different communications protocols," to see which ones work best and to help identify and repair bugs.

Lab testing is better than PC simulation, says Metrowerks' Dada.

Without such a facility, Dada said the alternative would be to test wireless applications using simulation software running on the desktop. "Then they send the application to the [carrier's] laboratory to obtain certification. Only after it's certified can they test it on the live network. If there are any issues or changes to the application, they have to go through the process again, which can take several weeks." The labs are open to hardware manufacturers, middleware and operating system vendors, and enterprise developers.

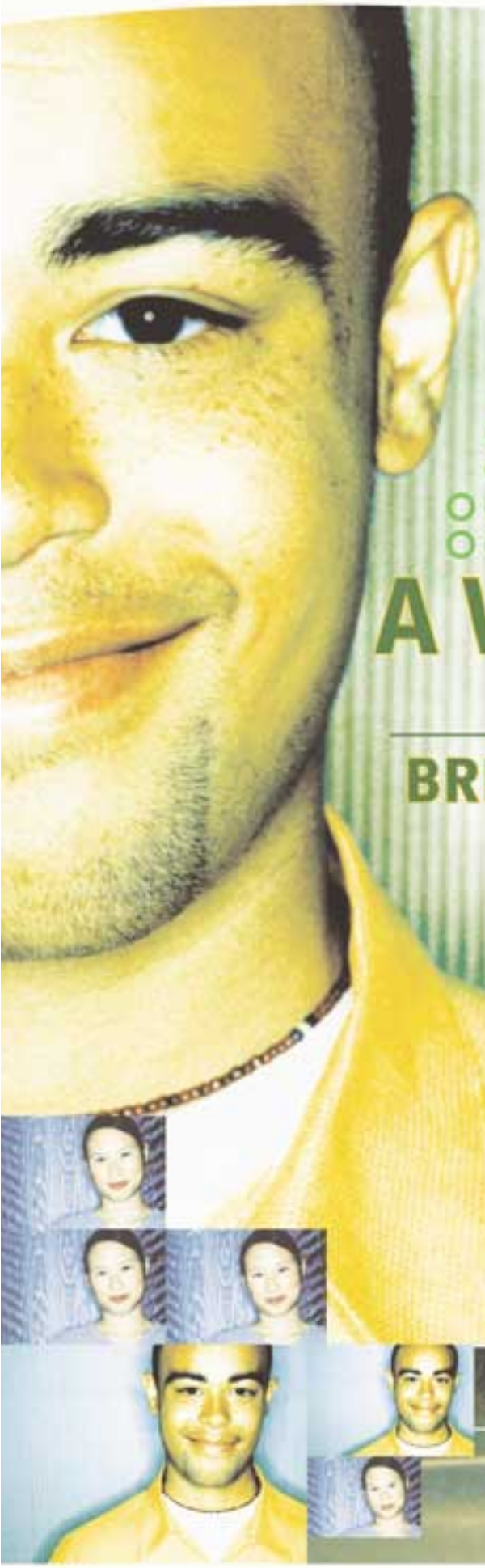
Many horizontal applications, including e-mail, messaging and contact management, are mature enough for relatively easy mobile deployment. Wireless carriers such as Nextel Communications Inc. include such applications with their wireless services for businesses, and offer tools and support to help companies mobilize their vertical applications. ▮

Register by April 25 and receive an Early Bird rate of only $299.

The greatest advance in wireless personalization is now the greatest opportunity for you. Learn how BREW™ opens the wireless world to developers. See how this open, standard environment allows you to write apps and get them to market quickly. Starter and advanced technical tracks, guest speakers and special business sessions show you how the BREW program supports your development efforts and puts you on the wireless road to success. Last year's conference sold out, so register now at

www.brew2002.com

brew™ 2002



NEVER HAS

A WIRELESS PLATFORM

OPENED SO MANY DOORS.

BREW 2002 DEVELOPERS CONFERENCE

QUALCOMM

JUNE 3–5, 2002 | **SAN DIEGO, CALIFORNIA**

REGISTER NOW : www.brew2002.com

©2002 QUALCOMM Incorporated. QUALCOMM is a registered trademark of QUALCOMM Incorporated. BREW and Customize. Personalize. Realize. are trademarks of QUALCOMM Incorporated.

sponsors:

IBM air2web ARM JAMDAT ROCKET MOBILE togabi uebraska LG

EDITORIALS

Wireless Goes Enterprise

For most employees within large enterprises, handheld wireless computers—be they Palm or Windows CE-based devices, extensible two-way pagers or Web-enabled cellular phones—are true personal computers. They're not supported by the company's IT department, they exist independent of any corporate applications, and although the monthly service bill might be paid for by the employer, there's no other enterprise tie-in.

Slowly, however, this is changing. The current crop of mobile wireless devices has sufficient processor power, memory, display capability and network connectivity to be seen as an enterprise computing resource. As the operating systems mature, as Java Virtual Machines and Pocket-PC application stacks find their way into more of these handhelds, the task of developing and distributing applications becomes easier. Coding tools, wireless gateways and mobile-enabled Web servers all are contributing to the increased interest in enterprise mobile computing.

In some ways, this trend is reminiscent of the introduction of the early Macintosh and IBM PC to Corporate America two decades ago, but with three key differences: Immediate demand for Internet connectivity, requirements for enterprise interoperability and ready availability of high-quality development tools for the creation of custom applications.

But think back to the early 1980s: Remember the hostility heaped upon PC users by IT professionals, particularly those in the data center? Those glass walls delineated fortresses designed to keep microcomputers—and their users—far away from business-critical information resources.

Now, as applications servers, *n*-tiered architectures, and the Internet are showing true success at tearing down those glass walls, mobile enterprise computing threatens to build them up again. Corporate executives and line-of-business managers want to mobilize their applications, for use not only with mobile clients on wireless LANs, but also opening them up to read-only and read-write access using cellular radio technology from remote locations.

The challenges they face are partially technological, but also cultural. Yes, bandwidth is constrained, and mobile devices are tricky to profile and develop for. But equally so, the idea of allowing a cell phone to access the order-entry system—even if it's to book new orders or check on inventory levels—is a frightening concept for many developers, network professionals, and computer-security specialists alike.

Despite these concerns, it would be a mistake to repeat the errors from the past. Instead, let's learn from them. The implementation and integration of wireless technologies shouldn't be a rogue project spawned within line-of-business groups, but should be conducted with the full active support of executive management and senior IT staff across all departments.

But that's not all. Ensure that the brilliant idea really suits the needs of the average employee, or at least those who are presumed to "need" the solution. If the wireless solution doesn't really simplify their life, then you've just wasted time, effort, money and goodwill. Bulling through the implementation of a wireless project that users don't support may cause more problems than it solves. ▮

GUEST VIEW

MOBILE DEVELOPERS: BE PERSISTENT

The wired and the wireless networking worlds operate under very different paradigms. The wired network assumes a fixed address and a constant connection with high bandwidth. A wireless network uses intermittent connections and has higher error rates over what is usually a narrower bandwidth. Most applications and messaging protocols are designed for wired networks, and they operate poorly or not at all in a wireless environment.

JOE SAVARESE

Even so, the wireless expectations of end users and IT managers are set by the performance and behaviors of their wired networks. Different workarounds have been deployed in specific environments, but they don't overcome existing limitations and, as a consequence, the demand for wireless data remains unmet. Below are some of the issues you need to be familiar with.

Battery life. No doubt about it, wireless communications have an impact on the battery life of a mobile device. To conserve battery life, users want to suspend their mobile devices when they are not using them or when they are in transit. Unfortunately, this has the same effect as roaming out of coverage—the application sessions are dropped. That not only can cause a loss of user productivity and satisfaction, but it might also cause client-side or server-side applications to fail or behave unexpectedly.

Radio coverage. No matter how good your wireless network is, you still can have coverage holes. A mobile device's range of mobility is limited by coverage. If your coverage isn't right—and there may always be holes, even if you have lots of overlap with your access points—you can still face dropouts. That brings you back to the same problem: How will your client-side and server-side applications handle this when users are roaming in and out of coverage?

Custom applications. Software developers often create custom mobile applications or use mobile libraries to get applications to work in a mobile environment. Customization drives up the cost of implementing wireless solutions, increases the time required to deploy a solution, creates software support requirements, and limits the use of wireless to those applications that can be specialized for mobility. It also means that users must be trained in the use of these custom applications, further driving up cost and time to deployment. The goal should be to find and deploy systems that don't require custom code or training.

Persistence. "Session persistence" means more than forwarding packets to a user's new location. Persistence is being used in many ways—what should it really mean? Just having packets forwarded as users roam among subnets, coverage areas and network types (wired LANs, wireless LANs and wireless WANs) isn't enough. Many vendors today use the term "persistence" for these packet-forwarding solutions, and some people have started to call this "network layer persistence."

If you don't have transport and application session persistence, the solution breaks down. Why? Because when a transport protocol cannot communicate to its peer, the underlying protocols, like TCP, assume that the disruption of service is due to network congestion. When this occurs these protocols back off, reducing performance and eventually terminating the connection. Crash!

Security. As you prepare to offer wireless applications, be alert to the fact that you may not know who is accessing them—even within your building. The security flaws in wireless networks have been widely reported, but that doesn't keep others in your organization from thinking that wireless LANs are just fine, thank you very much, without much attention given to the proper configuration of the devices, as well as the addition of encryption, authentication and virtual-private networking systems.

Encryption? VPNs? On the corporate LAN? Yes. Remember, in many companies there may be rogue access points, which are common enough that all advanced wireless network administration tools include a means of detecting them. Rogue access points can be installed by an employee who wants to extend wireless coverage but instead ends up making the whole network vulnerable to outside attack. And can your wireless LAN be accessed from outside the building, from an adjacent office or floor, or even in the parking garage or lobby?

Another thing to watch out for is relying on operating system-based security measures. If your organization is typical, you have more than one operating system on your network, and you can't rely on having the same security features for all of them.

For example, IPsec is often cited as a key to a security solution—but for mainstream devices running anything other than Windows 2000 or Windows XP, IPsec is not currently built into the operating system, and may only be available from a third party. If you have Windows 95 and Windows 98 devices, not to mention Windows CE and Pocket PC, you may have to purchase a different software package. This could be a management nightmare that your IT department wasn't ready for when a line-of-business unit commissioned a wireless-enabled application.

The expectations of wireless network users have been set by their desktop experience. They will expect to run any application wirelessly that they use on their desktops. And they will expect their wireless communications to remain completely secure. If user expectations aren't met, the wireless LAN that was a critical objective will fall into disuse. But if the system is made too friendly and ubiquitous, it could affect your security.

The challenge is to design around those challenges—both on the network side and within the development organizations. When you go to add wireless support to your apps or build new solutions, those are some of the issues you'll need to deal with. ▮

Joe Savarese is the CTO of NetMotion Wireless Inc., based in Seattle.

LETTERS TO THE EDITOR

PALM BLEW IT ON BEOS

Good to see BeOS once again getting the attention it deserves [“Palm on BeOS: Access Denied,” Feb. 1, page 4, or at www.sdtimes.com/news/047/story7.htm.] Further updates when major OpenBeOS milestones are reached would be nice. I would love to see a reasonable alternative to Windows, and initially I thought BeOS would be it. Too bad they ran out of money and had to sell to Palm. I agree with those that think Palm made a bad decision.

Scot Palmer

ASSERTIONS CONFUSING

Could Mr. Vaughan-Nichols please elaborate on the statement made in the article [“Playing Games With J2EE,” Feb. 1, page 27, or at www.sdtimes.com/cols/javawatch_047.htm], “Philip DesAutels, Microsoft’s project manager for XML Web Services, told me that ‘Java is write once, edit a thousand times.’ Of course, he has his own axe to grind, but we all know that he’s right.”

Exactly what do you mean by “he’s right?” I spent a lot of time writing server-side Java. I also write toolkits and frameworks in Java. I’ve not once had to edit my Java code to get it to work properly on a Mac, Windows, Linux or Solaris environment. In fact, I distribute class files with no changes.

So, exactly what editing are you talking about? Sockets work correctly with no changes. Collection classes work the same. I have to admit I am confused by your statement.

Are you referring to GUI work? Or perhaps you mean something like going from BEA to WebSphere? If so, it’s the code that utilizes those environments, not Java itself. I would certainly love to see some code that exemplifies your assertion.

Scot P. Floess

Steven J. Vaughan-Nichols responds: I mean both. While in theory, pure, snow-white Java can run on any system, in practice, almost every Java programmer I know tells me that they must at least “tweak” their code if not rewrite it, to go from one platform to another. After all, GUI capabilities vary, and most of us write server-level Java for a specific environment, such as WebSphere or WebLogic. Is Java far more portable than most programming languages? Of course. But class libraries or sockets alone do not a program make. A C programmer could say the same.

SWT BOOSTS JAVA ON CLIENT

I would disagree with the following paragraph from Mr. Vaughan-Nichols’ column [“Oh, Please! Not Another Vendor Fight,” Feb. 15, page 27, or at www.sdtimes.com/cols/javawatch_048.htm]:

“Those are not just my thoughts. I’ve spoken to several programmers who have used NetBeans. Discouraged by its speed, they’ve given Eclipse a try. Of course, Eclipse did just what you’d expect such a new tool to do: It broke. In fact, it broke a lot. But what else can you expect from such a young system? If you want people producing production code today, you’re going to be using NetBeans, not Eclipse.”

By just saying Eclipse broke a lot is being very unfair to Eclipse. I have been using it for the past couple of months and it has been a pleasure. True, it doesn’t have as many features/bloat as NetBeans, but it does its job well. I would like to commend IBM for releasing SWT. Sun had about 6 years to get AWT/Swing right and they failed miserably. SWT has the potential of making Java on the client a reality.

The JCP process is a joke. It is just there to make Sun look good. The bureacratic process of JCP makes the United Nations look good in comparison. When was the last time anything useful came out of a committee anyway?

Ravi Veeraghanta

MONEY’S ON MDA

Good story [“Has Java Hit a Fork in the Road?” Jan. 1, page 1, or at www.sdtimes.com/news/045/story1.htm]. Of course J2EE is a standard—*the* standard for server-based Java development—but the app server vendors all have to differentiate themselves somehow and, increasingly, the only way to do it is to add extra features on top of J2EE.

Frameworks are supposed to make development easier and to “increase ROI” by speeding up development. What happens if you have more than one app server type, or even version, in house? I know plenty of organizations who don’t upgrade for months after a new version of an app server has been released for two reasons: The migration will cost too much and take too long, and the systems they have work fine as they are. So, they start new projects with the new version and maintain existing projects with the old version.

In this case it’s hard to say how a new framework for an app server can deliver me any real ROI. It’d be much better to start at a higher level and to make sure I get my IT architecture right and then use the right tools to implement it. My money’s on the OMG’s MDA—Model Driven Architecture.

Robert Alexander

NOVELL STARTS TO ‘GET IT’

Novell has always been its own worst enemy [“Pinochle on Your Snout,” Feb. 1, page 29, or at www.sdtimes.com/cols/webwatch_047.htm]. By that, I mean that their PR engine is either idling in the parking lot, or someone forgot to put gas in the tank. Never mind the fact that it is a Formula 1 car. It’s only in the last year that the folks in Utah have been making some real noise about what Novellers have known all along. Many a great product has been doomed to the junkyard because it was not promoted properly. Fortunately, this is not the case with Novell, at least not anymore.

Wayne Rash’s article is a welcome response to all who think that the planet’s rotational axis is centered on Redmond, Wash. It isn’t, and the world isn’t flat either.

Prem Rajendran
Assistant Director of IT
Epstein Becker & Green

CORBA SUCCESS STORIES

Andrew Binstock’s characterization of CORBA as “complex,” and the comparison to services that support only messaging, is inaccurate [“Whatever Happened to CORBA?” Jan. 15, page 13, or at www.sdtimes.com/news/046/special1.htm]: CORBA is a flexible distributed application architecture that can be as simple or capable as an application requires. Thus basic client/server programs can use a simple Object Request Broker, and embedded apps can use a small-footprint version, while more demanding enterprise applications can purchase a scalable, fault-tolerant, load-balancing, transactional, secure ORB that installs and runs on a roomful of networked machines.

Here at the not-for-profit Object Management Group, we’ve detailed hundreds of CORBA applications at www.corba.org; new CORBA success stories continue to come in to OMG frequently, including recent ones from SABRE Group and Target Stores. Java is one of the biggest CORBA success stories, with many parts of its environment based on the CORBA specifications, including its transaction service and the interoperability protocol for EJBs.

But the OMG has been working beyond CORBA for years now. With the large number of messaging services and middleware platforms available, the problem lies not in picking one, as Mr. Binstock suggests—the bigger problem is integrating all of the platforms in various parts of a company with each other, and with those of its customers and suppliers. The solution to this is found in OMG’s Model Driven Architecture, based on modeling in the Unified Modeling Language.

Jon Siegel
Director, Technology Transfer
Object Management Group

BROADER LOOK AT MAC OS X

As someone who works on Solaris for my day job, and just ditched my home PC for a Mac running OS X, I was surprised to read “Apple Supplies ‘How,’ Lacks ‘Why’ ” [Jan. 15, page 1, or at www.sdtimes.com/news/046/story3.htm]. It looks like the article is mostly focused on Darwin and whether to develop for Unix/Linux or Darwin.

When programming at the Unix level, I guess things are pretty similar. However, Apple adds extras that are pretty nice but barely mentioned, and the provided links to Darwin sites are limited in scope. To get a broader idea of what is in Mac OS X (not just Darwin) it would be better to at least take a look at http://developer.apple.com/technical before deciding. This article didn’t provide much information.

And if you can’t live without Windows applications, you can always buy a copy of Virtual PC.

Christopher B. Hamlin

Letters to SD Times must include the writer’s name, company affiliation and contact information. Letters become the property of BZ Media and may be edited. Send to feedback@bzmedia.com, or fax to 516-922-1822. Please mark all correspondence as Letters to the Editor.

SD Times SOFTWARE DEVELOPMENT

Software Development Times
March 15, 2002 – Issue No. 050

Publisher
Ted Bahr
516-922-2101 x101 • ted@bzmedia.com

Editor-in-Chief
Alan Zeichick
650-359-4763 • alan@bzmedia.com

Executive Editor
David Rubinstein
516-922-2101 x105 • drubinstein@bzmedia.com

Senior News Editor
Edward J. Correia
516-922-2101 x100 • ecorreia@bzmedia.com

Assistant News Editor
Christina M. Purpi
516-922-2101 x111 • cpurpi@bzmedia.com

Copy Chief
Patricia Sarica
516-922-2101 x106 • psarica@bzmedia.com

Art Director
Mara Leonardi
516-922-2101 x109 • mleonardi@bzmedia.com

Columnists
Andrew Binstock
abinstock@pacificdataworks.com
Wayne Rash
wrash@mindspring.com
Oliver Rist
orist@mindspring.com
Steven J. Vaughan-Nichols
sjvn@vna1.com

Contributing Writers
Alyson Behr
alyson@behrcomm.com
Jennifer deJong
jdejong@vermontel.net
Lisa Morgan
lisamorgan@mindspring.com

Advertising Sales Representatives
Southwest U.S.
Julie Fountain
831-476-1716 • jfountain@bzmedia.com
Northeast/North Central U.S./Canada
David Karp
516-922-5253 • dkarp@bzmedia.com
Northwest U.S./Canada
Paula F. Miller
925-831-3803 • pmiller@bzmedia.com
Southeast U.S./Europe
Jonathan Sawyer
603-924-4489 • jsawyer@bzmedia.com

Director of Circulation & Manufacturing
Rebecca Pappas
516-922-1818 • rpappas@bzmedia.com

Circulation Assistant
Phyllis Oakes
516-922-2287 • poakes@bzmedia.com

Office Manager/Marketing
Cathy Zimmermann
516-922-2101 x108 • czimmermann@bzmedia.com

Customer Service/Subscriptions
866-254-0110 • service@bzmedia.com

Bookkeeping Services
Ken Hafner • Kiwi Partners Inc.
khafner@kiwipartners.com

Article Reprints
Reprint Management Services
Nicole Schneider
717-399-1900 x154 • nschneider@rmsreprints.com

BPA

BZ Media

BZ Media LLC
2 East Main Street
Oyster Bay, NY 11771
516-922-2101 • fax 516-922-1822
www.bzmedia.com • info@bzmedia.com

President
Ted Bahr

Executive Vice President
Alan Zeichick

On March 25th we will turn your notion of Web Services inside out.

www.sonicsoftware.com

SonicXQ™

Intelligent Backbone for Distributed Services

sonic SOFTWARE™

Backbone of the Extended Enterprise

© Copyright 2002 Sonic Software Corporation. All rights reserved. SonicXQ is a trademark of Sonic Software Corporation in the U.S. and other countries. All other marks contained herein are the property of their respective owners.

THANK YOU, LOU

One of the most important announcements in the computer industry passed with little fanfare last month: Lou Gerstner announced his retirement from IBM. When you consider how much of a fuss the same announcement from Bill Gates, Scott McNealy, Larry Ellison or even John Chambers would create, it's difficult to believe we have our values quite right. By any measure, Gerstner's tenure at IBM is one for the record books—a classic for business-school students for generations.

We've become so used to the warm, remarkably successful company that IBM is today that it's hard to remember how bad things were in 1993 when the company's board took a flier on Gerstner, a young hot shot from RJR Nabisco. IBM's fortunes had been declining for years. Mainframe sales were tapering, as were those of System 3*x* midranges; the PC business had been pre-empted by Compaq and Dell in hardware, and Windows trampled OS/2 in software. Only the RS/6000 and AS/400 lines were not in decline. And culture-wise, IBMers were the paragon of the conservative businessman. A sclerotic death for the old Big Blue was universally expected. Many analysts recommended the company be broken into parts and sold off piecemeal. Few expected survival; none resurrection.

One reason for the pessimism is the well-known difficulties stumbling companies face righting themselves. History is littered with firms incapable of doing so: a thousand dot-com companies, Novell and Ashton-Tate in software; DEC, Wang, Sperry, Burroughs and others in hardware. Getting a company back on its feet when the core audience disappears is exceedingly difficult because the company itself must change. And it must reinvent itself without losing core customers.

MIDDLEWARE WATCH

ANDREW BINSTOCK

Even once a company has raised itself off the canvas and propped itself back up on wobbly feet, it faces daunting challenges. The first is finding once again its confidence, its competitive edge. And even if it manages to find a swagger, potential new customers remain unsettled by the previous pratfall. Apple, for example, whose faithful are among the most faithful, has yet to grow beyond its predecline market share. Likewise Borland.

Gerstner tackled this challenge by ignoring the analysts and listening to customers and then to IBM itself. He visited IBM offices and labs to see what they were up to, and he visited IBM's customers to see what they wanted the company to be up to. He quickly concluded that IBM had an excellent tradition of delivering technological innovation (year in and year out, it is the assignee of more patents in the U.S. than any other company) and an exceptional reputation for customer service—all buried under a stifling corporate culture.

From customers, he heard that mainframes were no longer the end-all. Things were changing, and they wanted the IBM of old to come in and provide comprehensive working solutions: hardware, software, integration and service.

With this vision in mind, during the next three years Gerstner fired an army of hidebound old-timers, loosened up the culture, pushed innovation and focused on services. In concert with these moves, he made two fateful decisions: IBM would offer solutions that might include non-IBM technology, and IBM's software would embrace platform independence. All software would run equally well on all platforms.

It's impossibly hard for readers who weren't around at the time to understand how revolutionary the first decision was. The closest equivalent in today's terms would be for Sun to announce it would start shipping Windows on its servers. It was that unthinkable.

The second decision had a significant impact on developers. Shortly after Gerstner took over, Microsoft crucified IBM's OS/2 by refusing to grant access to source code for Win32 APIs. With no way to offer compatibility beyond Win16, OS/2 was doomed. Gerstner vowed that IBM would never again be hostage to another company's APIs. Which is why a few years later, the company hedged its Windows bets by becoming the world's biggest Java shop. The Sun-IBM licensing row unsettled IBM because once again its APIs were at the mercy of another vendor. So the company pulled back on Java and embraced Linux.

By revamping the culture and making some very tough calls, Gerstner rebuilt IBM to the great company it is today. Healthy, prosperous and so credible that, despite having been a central player in the dot-com craze, when the bubble popped, IBM's stock barely dipped. Neither Microsoft nor Oracle nor Sun can say that.

It will be a very long time before we see a company remade as successfully as IBM was by Gerstner. His tenure was one for the ages. Thank you, Lou. We'll really miss you. ▮

Andrew Binstock is the principal analyst at Pacific Data Works LLC.

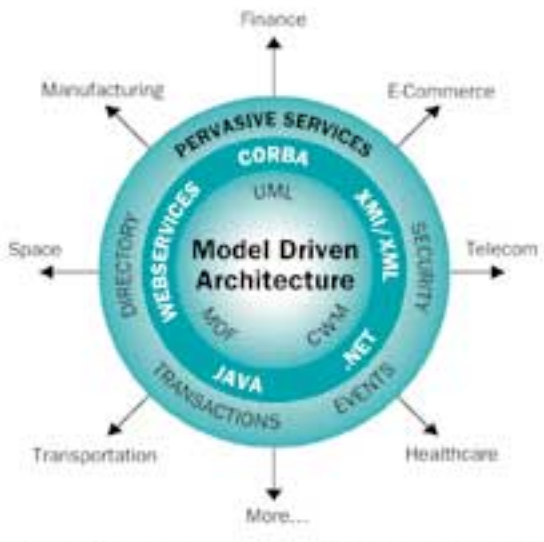
Register now for the Object Management Group Model Driven Architecture Seminar Series II
Industry expert speakers include: Dr. Richard Soley, Paul Harmon, and David Frankel
APRIL 2002 • SEATTLE, SAN DIEGO, DALLAS, CHICAGO, WASHINGTON DC
+1-781-444-0404 • www.omg.org/seminar

Cheap Application Insurance

The OMG Model Driven Architecture™

- Reduced cost throughout the application life-cycle
- Reduced development time for new applications
- Improved application quality
- Increased return on technology investments
- Rapid inclusion of emerging technology benefits into their existing systems

"This level of flexibility can also help ensure companies that they will be able to achieve their ROI goals with respect to their IT investments."
MICHELE ROSEN / RESEARCH MANAGER / IDC



"Now, companies can look at MDA as a stable foundation for maximizing software value and longevity."
GORDON BENETT / SENIOR ANALYST / ARLBURGEN GROUP

MDA™ provides a solid framework that frees system infrastructures to evolve in response to a never-ending succession of software platforms, while preserving and leveraging existing technology investments. It enables system integration strategies that are better, faster and cheaper.

OMG OBJECT MANAGEMENT GROUP
Object Management Group
First Needham Place, 250 First Ave.
Needham, MA 02494
+1-781-444-0404 • www.omg.org

CORBA® and the Object Management Group logo® are registered trademarks of the Object Management Group. OMG™, Object Management Group™, XMI™, Model Driven Architecture™, MDA™, OMG Model Driven Architecture™, are trademarks of the Object Management Group. All other products or company names mentioned are used for identification purposes only, and may be trademarks of their respective owners.

LARGEST GATHERING OF DEVELOPERS, PROGRAMMERS, AND *i*-TECHNOLOGY PROFESSIONALS IN THE WORLD!!

JUNE 24-27, 2002 • JACOB JAVITS CONVENTION CENTER • NEW YORK, NY

WIN A $35,000 LUXURY CAR!

ATTENDEES WILL BE INVITED TO TAKE A GOLF SWING TO WIN AND RIDE OFF IN A $35,000 LUXURY CAR!

ONLINE EARLY BIRD REGISTRATION

NOW OPEN! SAVE $400!

GO TO... WWW.SYS-CON.COM

JAVA XML WEB SERVICES

Focus on Java

Java, now mainstream, is the dominant back-end technology upon which next-generation technologies are evolving.

Hear from the leading minds in Java how this essential technology offers robust solutions to *i*-technology professionals and senior IT/IS strategy decision makers.

The Java Fast Picks on June 24, a Java-focused CEO Keynote Panel, and comprehensive conference sessions will focus you on Java every information-packed day!

JAVA IN JUNE ESPECIALLY IN NEW YORK

JDJ EDGE conference&expo

Java Track: June 25, 26, 27

The Java Track, with something for every developer from beginner to advanced, will look at the offerings from the latest Java2SE 1.4 release, discuss setting up the development environment with J2EE, offer two concentrated hours of Java Tools, and so much more. It will also take an in-depth look into the role that Java is playing in building up Web Services.

ALAN WILLIAMSON
JAVA CHAIR
EDITOR-IN-CHIEF
JAVA DEVELOPER'S JOURNAL

A Sampling of Java-Focused Sessions

- Java 1.4: What's New?
- Building Truly Portable J2EE Applications
- Java Tools For Extreme Programming
- Building Asynchronous Applications Using Java Messaging
- .NET vs. J2EE
- J2EE: Setting Up the Development Environment
- Building Web Services With J2EE
- Detecting, Diagnosing and Overcoming the Five Most Common J2EE Application Performance Obstacles

Focus on XML

XML is today's essential technology to develop and deploy Web services. Here's your chance to learn from expert practitioners how XML is making the next phase of the Web a reality.

Focus on standards, interoperability, content management, and today's new quest for more efficient and cost-effective Internet and intranet-enabled business process integration.

Focus on XML during information-packed days while you enjoy an XML/Web Services Keynote panel, comprehensive conference sessions, and an unparalleled opportunity to exchange ideas with peers and industry leaders.

XML NEXT G OF ENTERPRISE DEPLOYMENT

XML EDGE conference&expo

XML Track: June 25, 26, 27

The XML Track will focus on the various facets of XML technologies as they apply to solving business computing problems. This track will include emerging standards in XML Schemas, XML repositories, JDOM, application of XML for building Web services, XML/XSLT/XSL-based programming, JAXM and JAXP, XML databases, XML tools and servers, XML-based messaging, and the issues related to applying XML in B2B/EAI applications. This track targets audiences ranging from beginners to system architects and advanced developers.

NORBERT MIKULA
XML CHAIR
BOARD OF DIRECTORS, OASIS
INDUSTRY EDITOR
WEB SERVICES JOURNAL

A Sampling of XML-Focused Sessions

- XML Standards - An Overview
- OASIS Standards Update
- UBL - A Universal Business Language
- Bringing XML To PKI
- Link Management with Xlink
- Practical XSLT and Xpath
- Enterprise Content Management with XML
- XML in the Enterprise and Inter-Enterprise World

Focus on Web Services

Web Services, the next generation technology that will enable the Internet to work for you and your business, and finally provide that ROI you have been after, will be put under a microscope at Web Services Edge East 2002.

Information-packed sessions, exhibits, and tutorials will examine Web Services from every angle and will provide cutting-edge solutions and a glimpse at current and future implementations. Hear from the innovators and thought leaders in Web Services. Enjoy a highly interactive CEO Keynote panel that will debate and discuss the realities and promise of Web Services.

WEB SERVICES SKILLS, STRATEGY, AND VISION

web services EDGE conference&expo

Web Services Track: June 25, 26, 27

The Web Services Track will concentrate on the latest emerging standards. It will include discussions of .NET, Sun ONE, J2EE and App Servers, the role of UDDI, progress of the standards-making bodies, SOAP, and Business Process Management. It is intended for developers, architects, and IT management.

SEAN RHODY
CONFERENCE TECH CHAIR
WEB SERVICES TRACK CHAIR
EDITOR-IN-CHIEF
WEB SERVICES JOURNAL

A Sampling of Web Services-Focused Sessions

- Practical Experiences with Web Services and J2EE
- State Of the Web Services Industry
- The Odd Couple: Making .NET and J2EE work together
- Exploring the .NET My Services Initiative
- Standards Watch
- Guarding the Castle: Security & Web Services

IT Strategy Track: June 25, 26, 27

The IT Strategy Track will focus on the managerial and design aspects of the various development disciplines. Topics will include Standards, Architecture, Design Patterns and Best Practices, Project Planning and Management, and Extreme Programming.

Who Should Attend...

- DEVELOPERS, PROGRAMMERS, ENGINEERS
- *i*-TECHNOLOGY PROFESSIONALS
- SENIOR BUSINESS MANAGEMENT
- SENIOR IT/IS MANAGEMENT /C LEVEL EXECUTIVES
- ANALYSTS, CONSULTANTS

Featuring...

- UNMATCHED KEYNOTES AND FACULTY
- THE LARGEST INDEPENDENT JAVA, WEB SERVICES, AND XML EXPOS
- AN UNPARALLELED OPPORTUNITY TO NETWORK WITH OVER 5,000 *i*-TECHNOLOGY PROFESSIONALS

SPONSORED BY:

IONA END 2 ANYWHERE · ADDS · bea · TogetherSoft · SilverStream · Actional · MERANT · Altaworks · PolarLake · ALTOVA

MEDIA SPONSORS:

Java Skyline · Webservices.org · XML · WIRE · XML TIMES.com · CF Advisor · wireless · WebLogic · WebServices · Federal Computer Week · JPert · WROX · SD Times · XML · JAVA · WebSphere · ColdFusion

Hear these thought leaders in interactive, cutting-edge keynote addresses and panels...

JEAN F. ABRAMATIC
SR VP R&D, FORMER CHAIRMAN, W3C • ILOG

DAVE CHAPPELL
VP CHIEF TECH. EVANGELIST
SONIC SOFTWARE

TYLER JEWELL
PRINCIPAL TECH. EVANGELIST • BEA

GREGG KIESSLING
CEO
SYNAXA

DAVID LITWACK
CEO
SILVERSTREAM

ANNE T. MANES
CEO
SYSTINET

BARRY MORRIS
CEO
IONA

GREGG O'CONNOR
PRESIDENT
SONIC SOFTWARE

RICK ROSS
FOUNDER
JAVALOBBY

ERIC RUDDER
SR VP DEVELOPER & PLATFORM EVANGELISM
MICROSOFT

PATRICIA SEYBOLD
FOUNDER & CEO
SEYBOLD

OWNED AND PRODUCED BY
SYS-CON MEDIA

FOR EXHIBIT INFORMATION CONTACT: MICHAEL PESICK
135 CHESTNUT RIDGE RD. • MONTVALE, NJ 07645 • 201 802-3052 • MICHAEL@SYS-CON.COM

JAVA AND JAVA-BASED MARKS ARE TRADEMARKS OR REGISTERED TRADEMARKS OF SUN MICROSYSTEMS, INC., IN THE UNITED STATES AND OTHER COUNTRIES. SYS-CON PUBLICATIONS, INC., IS INDEPENDENT OF SUN MICROSYSTEMS, INC.
ALL BRAND AND PRODUCT NAMES USED ON THESE PAGES ARE TRADE NAMES, SERVICE MARKS, OR TRADEMARKS OF THEIR RESPECTIVE COMPANIES.

OPEN, CLOSED AND WEB SERVICES STANDARDS

Web services are hotter than hot, and the standards bodies aren't working fast enough for ISVs. So in early February, software giants like BEA, HP, IBM, Microsoft and Oracle founded their own industry-driven standards consortium, the Web Services Interoperability Organization, or WS-I. Sun is the only major player not associated with the WS-I, though it's expected that it will eventually join as well.

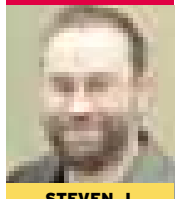
The purpose of the WS-I (www.ws-i.org), however, isn't to create standards. It is, as Neil Charney, Microsoft's director of the .NET Platform Strategy Group, said, "to help drive the requirements of standards that will be done elsewhere." I don't know about you, but I translate that as cracking a whip at the W3C, Oasis, UDDI.org and the Business Process Management Initiative to get them moving on finalizing Web services standards. Say, by yesterday.

The almost-50-strong WS-I member companies realize that they have a golden opportunity finally to create a set of true open and interoperable network programming standards. And that means gold for all the WS-I ISV players and for us, too.

Don't think that just because J2EE and .NET supporters are cooperating on standards at the network level, it means that the perpetual war between open and closed standards is over. Far from it.

Network developers are just beginning to notice that to deliver Web services using .NET, they need to buy into Microsoft's Passport service, which means that Web services consumers will need to have Passports. This means that everyone in their companies will need to authorize their use of an in-house network service by going out to Microsoft over the Internet.

JAVA WATCH



STEVEN J. VAUGHAN-NICHOLS

There are two problems with this picture. One is that you've got a lot of customer information in the hands of Bill Gates & Co. Microsoft is trying to sugarcoat this by insisting that the information will be secure and that the company is considering making Passport and even .NET work on other systems. I don't buy this. I mean, Microsoft perfected the expand, engulf and conquer business model. Why should you just take its word that it can be trusted with this type of information?

Besides if the connectivity standards are open, how would Microsoft earn a profit by letting other operating systems run .NET services? I fear Miguel de Icaza of the Mono Project, an attempt to bring .NET to Linux, is in for a disappointment. As in the past, no matter how close an ISV can get to a Microsoft proprietary protocol, Microsoft can always shift it just enough to ensure that its products, such as Visual Studio .NET, will be the clear winner.

The problem with such approaches based on proprietary standards for software managers is that they lock us into a single company. If Microsoft decides to update its Passport system or .NET Framework, we have to update our software. If it charges more for the licensing, we need to pay more because we're locked in.

This strategy is nothing new. The Microsoft Word document format, the old Lotus 1-2-3 command interface and the V.32terbo modem standard were all about controlling the de facto standard.

What makes Microsoft's Web services situation more fascinating than past such cases is that while the company attempts to lock you into its own standards at the back end, it's supporting open standards on the front end. With open standards, everyone gets to set and then abide by the same rules. The results are products that are interoperable with each other. Every Web page you look at exists because of the HTML, http and TCP/IP standards. With genuinely open standards, many products can thrive.

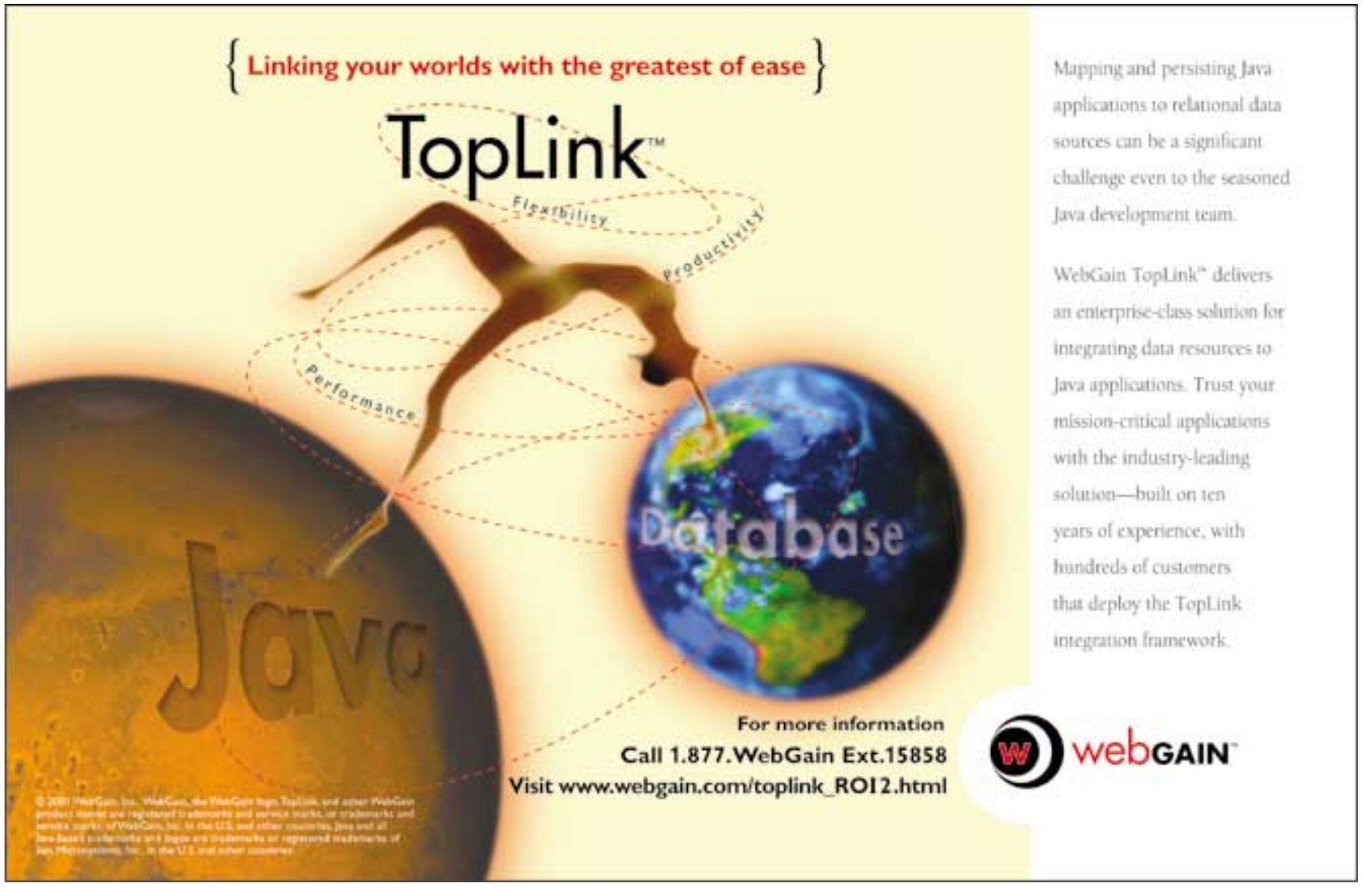
That said, every vendor tries to lock you into its own standards—not just Microsoft. Take the J2EE application server vendors. BEA, IBM, Iona, Oracle, Sun, et al., all support the fundamental Web standards. They also agree on most of the Java specifications.

But you have closed proprietary standards creeping in as well. Take the Eclipse versus NetBeans fight. As Sun's chief technology evangelist, Simon Phipps, claimed, "IBM is screwing up. They've forgotten to invite the only company that has actually done any open-source tools work, and they've broken open-source rule No. 1, which is not to fork an existing community until you discover that the community won't do what you want."

Still there is one critical difference here. On the .NET side, you either play by Microsoft's .NET proprietary rules or not at all. On the J2EE side, many of the vendors are pushing proprietary standards that extend the JCP's specifications, but your development teams don't have to use them. Besides, some, like Eclipse, may eventually become part of the mainstream via the Java Community Process, or at least we can hope that will happen.

Historically, genuinely open standards outlive closed proprietary standards. J2EE, with its fuller embrace of industry standards, will be the gold medal winner in the Web services contests to come. ■

Steven J. Vaughan-Nichols has been writing about technology for more than 15 years and also has worked as a programmer for NASA and the Dept. of Defense.



BUILD BETTER SOFTWARE

SOFTWARE DEVELOPMENT CONFERENCE & EXPO

Conference: April 22 - 26 • Expo: April 23 - 25

San Jose Convention Center • San Jose, CA.

SD

THE CONFERENCE OF CHOICE FOR DEVELOPMENT PROFESSIONALS

Also Featuring

WEB SERVICES WORLD

SD MANAGEMENT SUMMIT

5 FULL DAYS of world class instruction, exhibition and special events!

KEYNOTES:	▲ Anders Hejlsberg	▲ Clay Shirky	▲ Scott Meyers
	▲ Steve McConnell	▲ Karl Wiegers	
SPEAKERS INCLUDE:	▲ Bruce Eckel	▲ Bertrand Meyer	▲ Richard Hale Shaw
	▲ Elliotte Rusty Harold	▲ Karl Wiegers	▲ Robert C. Martin
	▲ Scott Meyers	▲ Martin Fowler	▲ Johanna Rothman
	▲ Larry Augustin	▲ Dan Saks	▲ Scott Ambler
ADVANCED CURRICULUM IN:	▲ JAVA	▲ .NET	▲ Web Services
	▲ C++	▲ XML	▲ Software Management

Register Today at SD.EXPO.COM

PLAN FOR HACKERS

The FBI and the White House have learned this. So have a number of companies and other organizations. Getting your Web site hacked is no fun.

Fortunately, you can design your site so that it can't happen. All it takes is planning and the right approach.

The problem with getting your Web site hacked is that there's not always a lot you can do using normal means. Public Web sites have to be available on the Internet, otherwise people can't see them. This means that operating system vulnerabilities can leave your site open, and there's not always much you can do about it. Worse, even if you do know of vulnerabilities, it means you may have to take your site offline for the update. Most companies would rather not do that.

So what can you do? The answer is to go beyond the operating system on your Web server. Which way you go depends on the specific demands of your site, the amount of traffic you expect and the way you expect content to be used on your site.

For example, a high-profile site that doesn't need to be constantly updated can simply use a CD-ROM disc to contain the site's static files. The CD can't be changed without physical access to the server, so the worst that can happen is that hackers can overload your site with a denial-of-service attack. But they can't replace your site's content. The downside is that you must replace the CD in order to update the site, and this means that you must have physical access to the server.

Still, a CD-ROM (or other read-only storage device) takes some planning. You will have to arrange for any dynamic content to be stored on another server that's very secure. For example, you could keep it on a SQL server behind the firewall. Likewise, any content you receive from users of your site will have to be stored elsewhere. Of course, storage in a secure database on another server behind a firewall is a good practice anyway.

Unfortunately, this isn't the answer for all Web sites. Perhaps your Web site exists at an ISP's location. Or perhaps your traffic levels require better performance than what's available from a CD-ROM-based solution. Perhaps you can't afford to take your site down to replace CD-ROMs, or you have updates too frequently to make this solution practicable.

Whatever the reason, you still need to protect your Web site from having the content changed by hackers and others.

One way to do this is by using a product like WebAgain from Lockstep Systems Inc. (www.lockstep.com). WebAgain is a package that automatically repairs hacked Web sites, meaning that if hackers do manage to get beyond the defenses you've built into your Web site, WebAgain immediately removes the changes and restores the site to its original condition.

WebAgain lives on a server that can be located inside your firewall, but it can monitor your Web servers anywhere. While you can set the details of how the monitoring works to meet your needs, a typical installation conducts a brief scan of your Web site perhaps every minute, and a detailed scan less often to keep from impacting performance.

When it scans your Web site, WebAgain compares the content on the site with a copy it keeps internally. When it finds a file that's changed, WebAgain copies the file on its server to the Web server. This means that if the hackers that have attacked your site replaced the images of your products with, say, photos of porn stars, your product photos are back in seconds.

WebAgain first checks the Web server's directory for changes in file size or date, but a more detailed content scan kicks in every hour or so (you can change this) in case your hackers are smart enough to upload content with the correct date and file size info. WebAgain works with any Web server software and any server operating system, the company says.

The biggest change to your operations with WebAgain is that you publish Web site updates to the WebAgain server rather than directly to your Web server. Once you've done this, WebAgain will detect the differences between the Web server and its own content, and replace the content on the Web server with the updated material.

The biggest risk with products like WebAgain, or with read-only solutions for that matter, is that the physical security of the server containing the original Web content becomes critical. In addition, the security of your internal enterprise network becomes critical with WebAgain. A disgruntled employee with access to the server can defeat both systems, either by replacing the Web CD-ROM with one of his own, or by changing the content on the WebAgain server.

Fortunately, while internal threats are real, the means of controlling them are known and are somewhat easier to implement. In any case, those are no longer issues for the Web development team.

However, designing a Web site that can live on a read-only disk, or one that can be published to a WebAgain server is a development issue. But with WebAgain, the issues are minimal once your staff gets used to the idea that they're not publishing to the Web server directly.

Unfortunately, the Web development world is to some extent being held hostage by people who find pleasure in destroying what you've built. As long as software companies fail to deliver server operating systems without gaping security holes, there's not much you can do, except find ways to work around them.

Now, at least, those ways exist. ▮

Wayne Rash is a technology journalist and consultant.

VISUAL STUDIO .NET HELPS PPC

Play with a Compaq iPaq, with its fast CPU and 128MB RAM, and you'll never even look at a Palm V again.

Now before the more zealous of you turn to back issues and dig up the column in which I flippantly pooh-poohed handhelds as little more than executive toys, allow me to reiterate that I still think they're little more than executive toys. I still haven't seen a broad killer application for handheld computers—the same way desktop publishing pushed the Macintosh and spreadsheets sold corporate PCs.

Vertical applications are a different matter; there are a number of important handheld applications in a variety of vertical markets—maintenance and hospitality are two, but an especially cool one is turning out to be law enforcement. But I stray.

The handheld killer application aimed at a consumer or general business audience has yet to be conceived. But that's not to say the industry isn't trying, and one company putting a lot of resources into this particular fray is Microsoft. The recent and endlessly ballyhooed release of Visual Studio .NET, for example, may have significant ramifications for e-business developers, but it also has a number of pluses for those developing Pocket PC applications—hopefully enough for someone to turn light-bulb inspiration into productive pocket reality.

A key development is that Visual Studio .NET allows Windows-oriented developers to build Pocket PC apps with more than just Visual Basic .NET, as you now have C# to draw upon as well. That's both good and bad. Good in the sense that you've got real alternatives, but bad in that no matter which way your developers turn, they'll have to eat some kind of learning curve.

The C# language is brand-new, so there's going to be a definite familiarization process, even for your brightest team members, and Microsoft has added so many changes to Visual Basic .NET over Visual Basic 6 that even experienced Visual Basic developers will have to do some studying to use the new environment as well. It would have been nice if Microsoft had included Visual C++ as a Pocket PC alternative, but so far no-go on that language from Redmond.

And because you'll be developing via the .NET Framework, you also get to make use of all its advantages, including the Common Language Runtime (CLR), managed code and all the other enhancements. Naturally, this will continue to push you into a Microsoft-oriented Web services direction as well as present the same cross-platform problems you encountered in desktop development, but some of this at least is mitigated, as you're developing for a single platform in any case.

Unfortunately, that's not the only downside, as even the current Pocket PC spec has no hardware provision for executing .NET code written for the CLR, the managed execution environment. That means no ROM support for running managed code, and that, in turn, means oodles of application overhead. Microsoft claims it's working on this problem, but for now the question of managed versus unmanaged code performance on Pocket PC devices is definitely valid. Maybe not for buffed-up iPaqs, but certainly for Pocket PC-based mobile phones, pagers and the like.

Soon Microsoft will release a plug-in for Visual Studio .NET dedicated to Pocket PC development. Microsoft was adamant in pointing out that its decision to move to a plug-in architecture was in response to customers' demands and complaints about its previous strategy, which required that developers download myriad independent and non-integrated toolkits for a variety of platforms. Plug-ins such as Smart Device Extensions (SDE) for the Pocket PC platform are designed to do away with this problem since regardless of platform, we'll all at least be working in identical (or highly similar) IDEs.

The SDE plug-in not only includes a Pocket PC compiler and debugger, but Pocket PC-specific utilities as well, including a new project type aimed specifically at mobile devices, a registry editor and more. Does that mean it's an automatic upgrade path from C++'s eMbedded Visual Tools? That all depends on your intended application.

Certainly anything that intends to access Web services would do well from SDE, but more localized applications may still be best built outside of .NET. Another consideration is the Pocket PC user interface. If it's one area that's been holding back the handheld movement in general, it's been the user interface—both hardware and software. But that hasn't stopped vendors from trying, resulting in a never-ending trickle of add-on keyboards, styluses and voice-recognition capabilities.

Determining your intended UI is a requirement before building a Pocket PC application and may well dictate the development environment. And maybe that application will be the real killer app that the handheld market has been waiting for. ▮

Oliver Rist is a freelance technology journalist and vice president of technology at AIC Inc.

PROMOTING AGILE PROCESSES

It was just about a year ago when 17 thought leaders in software development gathered at a ski lodge in Utah and hashed out a paper called "The Agile Manifesto," which set forth principles and practices they believe are critical to successful software development.

Now, a year later, the not-for-profit Agile Alliance has come together to promote agile development processes and educate software developers and managers about them. Among the members of the alliance are many of the original signers of the manifesto, such as Martin Fowler, Jim Highsmith, TogetherSoft's Jon Kern and Ken Schwaber of Advanced Development Methods. Others, such as Rational's Grady Booch, have more recently come on board.

INDUSTRY WATCH

DAVID RUBINSTEIN

The managing director of the group is Mary Poppendieck, who retired from 3M Corp. after 20 years in software systems and product development. Yet when she looked at what was happening in the world of software development, she found sympathy for the "lightweight" processes being advocated by Fowler and others. "I bring the outside paradigms to software development," she said. "When I looked at the heavy methodologies, I looked at them and said this is nowhere near the fundamental principles we used at 3M to be really successful. Then I found the other voice. The lightweight methods are closer to how I found that people work, and how it seems more natural to follow these practices."

While she acknowledges each of these new agile processes is different, there is enough common ground for the Agile Alliance to promote the general concept. "There are the same barriers to use, the same needs of the customers," Poppendieck said. "We do not advocate any particular process. We won't push any particular tool or method."

Among the values stated in the manifesto are "individuals and interactions over processes and tools," "working software over comprehensive documentation" and "responding to change over following a plan." Fowler and others have said in the past that software development is about developers working together and working with the customer or end user of the software; they believe the day of the "hero coder," who writes hundreds of lines of code per day in a vacuum, are over. To the agile believers, the process includes smaller code delivery and more testing, more collaboration and communication, and more frequent delivery of working software, to ensure the software is of the highest quality.

The Agile Alliance, which formed in January, still is working on the types of programs it will make available to the development community. There already is a membership program, and the Web site (www.agilealliance.org) is Spartan and under development, but little else is concrete now. "Most people in the alliance believe in the concept of emergence," Poppendieck said. "The right things [for the organization to take on] will emerge over time. Individual members can create programs if they meet the objectives of the group and the manifesto."

One of the barriers the group hopes to break down is the fear and trepidation that software development managers must deal with before signing off on large investments in software, developer time and processes. These people are the ones who have seen huge investments in tools required under heavier development processes, such as full-blown modeling and use-case products, that drown users in a sea of information without any ROI. "These are the 'go do more homework' methodologies," Poppendieck said. "If you're a manager and you don't know how to make a project more successful, you think the answer is to plan more, to get more detail. There's evidence to show that this doesn't work."

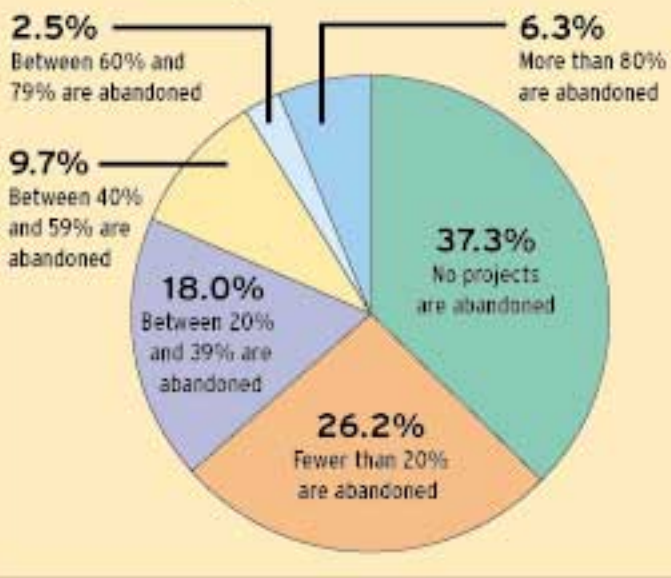
Instead, Poppendieck and the agileites believe managers would do better by making smaller, more rapid incremental investments in agile processes than one huge investment in a process or system that severely hinders adapting to changes in requirements as the project is being developed.

They also believe that delivering working software every few weeks is preferable to coding and testing in larger chunks over longer periods of time; it certainly is better for a development team to know after a few days that something is awry than to wait a few months to find out, when making changes and corrections are more difficult. "In a world where things change so rapidly, our approach is to do small amounts and test," Poppendieck said.

The development and use of these agile processes still are in the early stages, supporters acknowledge, and they believe that bringing information to development managers is the best way to get them to adapt to these methods. As sensible as they may sound, overcoming years of "We do it this way because we've always done it this way, and it works for us" may prove to be more daunting than debugging millions of lines of code.

David Rubinstein is executive editor of SD Times.

What Percentage of Your Projects Are Not Completed or Delivered?



EVANS DATA WATCH

Every developer can tell tales of projects that are so far over budget, past deadline, filled with bugs or simply messed up that they're canceled. Perhaps some of the work can be salvaged, but depending on the scale of the abandoned project, many programmer-years of development and significant dollars are simply thrown away. There are not only those direct costs, but also opportunity-lost costs: Had those development resources been applied to other projects that *were* completed, how would the company have benefited?

In the worst cases, 6.3 percent of developers surveyed replied that four out of five projects are abandoned before completion—and actually, 2.8 percent said that 90 percent or more of projects were never delivered.

In the best cases, more than a third of developers—37.3 percent—said that all projects were completed successfully, while another 26.2 percent said that although sometimes projects were abandoned before delivery, that constituted fewer than one-fifth of all projects.

Source: Embedded Systems Developer Survey 2002, ©Evans Data Corp.
www.evansdata.com

BUSINESS BRIEFS

Performance testing solutions provider **Ixia Inc.** has acquired the ANVL protocol conformance product line from **Empirix Inc.**, the companies said. Terms of the agreement were not disclosed. ANVL (Automated Network Validation Library) extends Ixia's offerings beyond performance assessment and data analysis, according to Ixia CEO Errol Ginsberg . . . Debugging tools vendor **Etnus Inc.** last month announced record sales and revenues for 2001. The company reported a 47 percent increase in the number of downloads of its TotalView debugger as well as a 44 percent rise in the number of licenses issued . . . **SilverStream Software Inc.** reported declining revenues and bigger losses for its fiscal fourth quarter, which ended Dec. 31, 2001. Revenues were $9.7 million compared with $26 million a year earlier, while the net loss was reported at $51.5 million; the loss for the same period in 2000 was $7.5 million. Net loss for the year was $115.1 million as compared with a loss of $28.3 million for fiscal year 2000 . . . Component seller **Flashline.com Inc.**, founded in 1998, secured its first round of private equity funding, receiving $6 million from **Adams Capital Management**, Flashline announced . . . **VA Software Corp.**, provider of the SourceForge collaborative software development platform, announced second-quarter revenue of $5.1 million and a pro forma net loss of $6.9 million, or 13 cents per share, that beat analysts' predictions. Expected loss for the period, which ended Jan. 26, was 16 cents per share. For the period a year earlier, the company reported a loss of $74.1 million, or $1.57 per share. Revenues for six months ended Jan. 26 were $10.6 million, compared with $98.6 million for the first six months of fiscal 2001 as the company made the transition from selling hardware to software. According to VA Software president Ali Jenab, the rate of cash burn has declined by almost 50 percent, and the company retained $65 million in cash and securities, offering what he called "adequate liquidity" to execute the business plan. ■

CALENDAR OF EVENTS

CTIA Wireless March 18–20
Orlando, Fla.
CTIA
http://wireless2002.ctsg.com

JavaOne March 25–29
San Francisco
SUN MICROSYSTEMS INC.
www.sun.com/javaone

AppsWorld April 7–10
San Diego
ORACLE CORP.
www.oracle.com/appsworld/sandiego

Voice on the Net April 8–11
Seattle
PULVER.COM
www.pulver.com/von

Tech·Ed April 9–13
New Orleans
MICROSOFT CORP.
http://msdn.microsoft.com/events/teched

Software Development Conference April 22–26
San Jose, Calif.
CMP MEDIA LLC
www.sdexpo.com

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

Install Configure Update

If your deployment solution doesn't do all this, you don't have a solution at all.

From client to server, InstallAnywhere® is the only multi-platform software installation, configuration, and updating solution that developers ever need. Top companies like Apple, BEA, Borland, Compaq, Hewlett-Packard, IBM, Iona, Intel, Nortel, Novell, and Sun Microsystems use InstallAnywhere to deploy their products to customers worldwide.

<INSTALL> InstallAnywhere is the world's most powerful multi-platform software deployment solution. With support for multiple operating systems, 29 languages, and silent, console, & GUI installations, no other solution offers broader platform support or greater flexibility.

<CONFIGURE> InstallAnywhere is packed with everything you need to get your software running right, and it's easily extended through powerful built-in APIs. And, if you need an even more customized solution, Zero G's industry-leading Professional Services and technical support staff can help.

<UPDATE> InstallAnywhere contains PowerUpdate™ technology, which ensures that end-users will always have the latest and greatest version of your software. And when end-users are running the right version of your software, you save money on support and increase end-user satisfaction.

<MORE INFO> Go to www.ZeroG.com to learn more about the most powerful, easy to use, and flexible multi-platform installation and updating solution available. Better yet, come visit us at JavaOne in San Francisco from March 25 to March 28 and see for yourself.

InstallAnywhere

ZERO G

WWW.ZEROG.COM

© 2002, Zero G Software, Inc. Zero G, Zero G Software, PowerUpdate, and InstallAnywhere are trademarks or registered trademarks of Zero G Software, Inc. All other trademarks are property of their respective owners.

FIX THE PROBLEM? I CAN'T EVEN FIND IT!

Everyone is looking to you for the answer. Your new Web application performed flawlessly in QA. But now it's live, the phone calls are coming in, and you have no idea where the problem is. Is it the application, the transaction server, the database? You need component-level views into your entire production application so you can find and fix the problem fast. You need Introscope.®

wily technology

All systems green.™

1 888 GET WILY

www.wilytech.com

Introscope is a registered trademark of Wily Technology, Inc. The Wily logo is a trademark of Wily Technology, Inc.